National Park Service
U.S. Department of the Interior

Santa Monica Mountains National Recreation Area
California

General Management Plan
Environmental Impact Statement

Volume 1 of 2

Final

General Management Plan

&

Environmental Impact Statement

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Santa Monica Mountains National Recreation Area

~ California ~

JULY, 2002

United States Department of the Interior – National Park Service

Final General Management Plan & Environmental Impact Statement

SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA

Los Angeles and Ventura Counties, California

This *General Management Plan / Environmental Impact Statement* describes and analyzes five alternatives for managing Santa Monica Mountains National Recreation Area. The approved plan will provide a framework for managing development, visitation, and natural and cultural resources for the next 15 to 20 years. Some issues to be addressed include impacts to natural and cultural resources caused by development, growing visitation and demand for outdoor recreation, lack of public transportation to and within the national recreation area, and increasing awareness about the national recreation area among residents of the metropolitan Los Angeles area.

The **no action alternative** provides a baseline for evaluating the environmental effects of the other alternatives. Current management practices would continue unchanged. Park managers would provide for visitor use and respond to natural and cultural resource management concerns according to current policy and legal requirements as funding allowed. About 30 percent of parkland would be designated low intensity. The **preferred alternative** incorporates the exceptional elements of the following three alternatives. Significant natural and cultural resources would be protected while providing compatible recreation and educational programs to a diverse public. About 80 percent of parkland would be designated low intensity. A Trail Management Plan would be prepared to address development and management of the trail system. Small pockets of concentrated high intensity activities would be located in nonsensitive or previously developed areas. Emphasis in the **preservation alternative** would be on preserving natural and cultural systems. About 80 percent of parkland would be designated low intensity. Some park-related development would be removed in sensitive areas. More educational exhibits would provide people with information about natural and cultural resources. Visitors would have the opportunity to visit, explore, and learn about the park through a variety of virtual "visitor centers" and informational Web sites. These alternative experiences would preserve resources by increasing appreciation and understanding. The emphasis in the **education alternative** would be on developing stronger environmental and cultural education programs. The NPS would work with local school districts and other education partners to deliver an outdoor experience to every child in Los Angeles. About 80 percent of parkland would be designated low intensity. All proposed facilities would have a strong educational emphasis. Overnight educational camps would be available to groups. People would understand and value the ecosystem through interactive educational programs using cutting-edge technology. In the **recreation alternative** the emphasis would be on maximizing recreation with new park development concentrated in nonsensitive or previously disturbed areas. A broader dispersion of outdoor recreational facilities would be provided without jeopardizing the long-term preservation of natural and cultural resources. About 65 percent of the park would be designated as moderate intensity. Facilities would be improved and/or expanded to accommodate growing demand, and existing wilderness areas would be protected.

Due to the general nature of the analysis presented, the types of environmental impacts for each of the five alternatives is fairly similar. They differ in the intensity and location of visitor uses relative to sensitive resources and required level of park management. The recreation alternative has the highest number of facility developments; however, most of these facilities are located in high-use areas and away from sensitive resources.

The public review period on the *Draft Environmental Impact Statement* ended May 31, 2001. This final document includes the results of the public comment on the draft document. The no-action period on this final plan and environmental impact statement will end 30 days after the Environmental Protection Agency has accepted the document and published a notice of availability in the *Federal Register*. For further information, write to Superintendent, Santa Monica Mountains National Recreation Area, 401 Hillcrest Drive, Thousand Oaks, CA 91360, telephone 805-370-2300, or e-mail www.nps.gov/samo.

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The Santa Monica Mountains protect the greatest expanse of mainland Mediterranean ecosystem in the national park system.

▲ *Plant life flourishes in the Park (NPS photo).*

ENVIRONMENTAL CONSEQUENCES

Introduction

The general management plan presented previously in this document is conceptual in nature. Therefore, the following environmental analysis is necessarily quite general. Many of the action items presented in the document would require additional environmental analysis, in the form of environmental assessments or environmental impact statements, prior to implementation. Many items would also require additional compliance with federal biological and cultural resources laws and regulations.

This "Environmental Consequences" chapter describes the impacts of implementing each alternative as well as the actions common to each alternative. The chapter is organized by alternative, with scientific disciplines (except those dismissed from further consideration) presented as subtopics in the same order as the chapter on affected environment. These disciplines include:

- Air Quality
- Soundscapes
- Soils and Geology
- Water Resources
- Floodplains
- Biological Resources and Wetlands
- Paleontological Resources
- Cultural Resources
- Visitor Experience
- Land Use and Socioeconomic Environment

Before the presentation of impacts, there is a summary of regulations and policies that guide and limit management actions, which are listed by the scientific disciplines. This is followed by the methods and assumptions used to assess the impacts on each discipline. Then, the environmental impacts of each alternative are discussed. Cumulative impacts and conclusion statements are also discussed where appropriate.

Impact Topics Dismissed from Further Consideration

ENVIRONMENTAL JUSTICE

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs a and policies on minorities and low income populations and communities.

For the purpose of fulfilling Executive Order 12898, in the context of the National Environmental Policy Act, the alternatives addressed in this plan were assessed during the planning process. It was determined that none of these alternatives would result in discernable disproportionately adverse effects on any minority or low income population or community. The following information contributed to this conclusion:

- The development and actions in the alternatives would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect negative or adverse effects on any minority or low-income population or community.
- The impacts on the natural and physical environment that would occur due to any of the alternatives would not adversely affect any minority or low-income population or community.
- The alternatives would not result in any identified effects that would be specific to any minority or low income community.
- The park staff has consulted and worked with the affected American Indian tribes in cooperative efforts to effectively manage the recreational potential of the park and its tourist related resources and will continue to do so. Also, no negative or adverse affects were identified that disproportionately and adversely affect the tribes.
- Impacts on the socioeconomic environment due to the alternatives are minor or positive and occur mostly within the local and regional geographic area near the park. These impacts would not occur at one time, but would be spread over a number of years, this, reducing their effects. Also impacts on the socioeconomic environment are not expected to substantially alter the physical and social structure of the nearby communities.

DARK NIGHT SKIES

"The National Park Service will preserve, to the greatest extent possible, the natural lightscape of parks, which are natural resources and values that exist in the absence of human-caused light. Recognizing the roles that light and dark periods and darkness play in natural resource processes, and the evolution of species the Service will protect natural darkness and other components of the natural lightscape in parks." (NPS *Management Policies* 4.10, Lightscape Management, NPS 2001.) The stars, planets, and Earth's moon visible during clear nights influence humans and many other species, such as birds that navigate by the stars or prey animals that reduce their activities during moonlit nights.

Scientists have recently discovered that darkness is needed to optimize human health. Only when it is really dark do humans produce the hormone melatonin. Melatonin fights diseases, including breast and prostate cancer. However, if there is even a little light around a person's bed at night, their melatonin production switches off. The

immune systems of some animals also grow weak if there is artificial light at night.

To prevent the loss of natural darkness the NRA would not use artificial lighting in sensitive habitat areas or other areas where dark-dependent natural resource components of the park might be disrupted. The NRA would seek the cooperation of park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial light into the night scene of the NRA. The NRA would work with communities surrounding the park to develop local dark night sky ordinances. In addition, the following mitigation measures would be standard practice at the NRA. Unnecessary night lighting would be avoided and eliminated. Artificial lighting would be restricted to those areas where security, basic human safety, and specific cultural resource requirements must be met. Minimum impact lighting techniques would be used including shielded light fixtures to prevent light spill over and use of low-intensity lights.

To comply with NPS lightscape policy all outdoor lighting at the SMMNRA would use best management practices to reduce light trespass impacts. Due to the implementation of these mitigation measures there would be no noticeable impacts to the dark night sky from any of the alternatives, therefore we are dismissing this topic from further discussion.

Analysis of Impacts

METHODS FOR EVALUATING IMPACTS

Overview of Regulatory Compliance

The General Management Plan and Environmental Impact Statement describes a number of projects that could be implemented in the future. In general, these projects are in the conceptual stage and specific environmental regulatory compliance requirements cannot be set forth at this stage. However, the statutes, regulations, laws and ordinances that would affect projects undertaken by the National Park Service, California State Parks and Santa Monica Mountains Conservancy are described below.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) provides guidance for the analysis of environmental impacts. A summary of analytical concepts that are utilized in the environmental consequences section is provided below.

A "significant" impact as defined in NEPA/CEQA requires considerations of both context and intensity. (40 CFR 1508.27) Context means that the significance of an action must be analyzed in several perceptions, such as the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For example, in the case of a site-specific action, significance would usually depend upon the effects in relation to specific locale rather than in the region as a whole.

"Intensity" refers to the severity of the impact. Impacts of an action are characterized as negligible, minor, moderate, or major. Criteria for characterization of impact intensity varies by discipline, but generally follows this scheme:

- ***Negligible*** – Effects are considered not detectable and would have no discernible effect on a resource.
- ***Minor*** – Impacts are present but not expected to have an overall effect on a resource.
- ***Moderate*** – Impacts are clearly detectable and could have an appreciable effect on a resource.

- ***Major*** – Impacts would have a substantial, highly noticeable influence on a resource.

Impacts may be either beneficial or adverse. Context and intensity are evaluated for beneficial as well as adverse impacts. All impacts are described as temporary, short term, or long term.

In 40 CFR 1508.7, a "cumulative" impact is defined as the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions, regardless of which agency (federal or non-federal agency) or person undertakes such other actions. A cumulative impacts analysis could be described as an x + y =z equation, where x represents the impacts of the actions proposed under each alternative; y is the past, present, and reasonably foreseeable future actions; and z is the cumulative impacts. The geographical context for cumulative impacts and the relevant impacts of past, present, and reasonably foreseeable future actions are examined by discipline. Methods for cumulative impacts analysis are described in greater detail in the "Cumulative Impacts Methodology" section of this chapter.

Mitigation measures would be implemented wherever adverse environmental impacts are identified. Mitigation measures include:

A) Avoiding the impact altogether by not implementing a certain action or portion of an action.

B) Minimizing impacts by limiting the intensity or extent of the action.

C) Rectifying the impact by restoring the affected environment in close vicinity of the impact (onsite).

D) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

E) Compensating for the impact by replacing or providing substitute resources or environments elsewhere (offsite) (40 CFR 1508.20).

Mitigation measures for each of the alternatives are incorporated into the environmental consequences discussion of each resource issue area and are listed under each alternative in the alternatives chapter of this GMP/EIS. Where applicable, the term "irreversible commitment of resources" is used in this document. It is interpreted to mean that resources, once committed to the proposed project, would continue to be committed and production or irreversible use of resources would be made with implementation of the project. In addition, the term "irretrievable commitment of resources" might be used. It is interpreted to mean that those resources used, consumed, destroyed, or degraded during construction, operation, and maintenance of the proposed project could not be retrieved or replaced by the project.

NATURAL RESOURCES

Air Quality

Most air pollution in the Santa Monica Mountains NRA is transported from mobile sources outside the park, especially from Los Angeles County and the surrounding area. In this *General Management Plan* the SMMNRA proposes to institute a variety of transportation management actions to reduce the number of individual trips to the park, such as providing shuttle busses within the park, transit coordination with surrounding communities, transportation education, and park-and-ride facilities. These actions would result in local improvements to future traffic patterns near the SMMNRA.

Actions within the SMMNRA General Management Plan are included in the 1998

Regional Transportation Model, which was developed by the Southern California Association of Governments (SCAG). The Model is used to generate information about existing and future traffic amounts, patterns, and congestion for the greater Los Angeles area. It takes into consideration all planned land developments and estimates the most likely amount and type of future development that would occur in the area. Traffic volumes for the year 1998 were used to reflect existing conditions, and the year 2015 was used for the planning year horizon analysis.

The proposed alternatives do not include building new roads or expanding existing roads. According to the SCAG Regional Transportation Model transit patterns would experience only minor or negligible traffic increase in any particular area of the NRA in the future. There would be no change in the existing or projected levels of service required in the NRA from proposed actions.

Construction Phase

Due to the relatively small scope of the individual facility development activities, the construction-related air quality impacts analysis emphasized identifying and implementing dust abatement and equipment exhaust measures to mitigate potential impacts.

Operational Phase

Air pollution emissions in SMMNRA including stationary, area, and mobile sources emissions were characterized and quantified using the California Air Resources Board (ARB) Emissions Factor (EMFAC) model. Stationary and area sources in Ventura and Los Angeles Counties were compared to emissions from stationary and area sources in Santa Monica Mountains NRA. These comparisons indicate that SMMNRA emissions are a tiny percentage of the overall regional emissions. The number of visitor vehicles operating in NPS units is often correlated to the number of annual visitors to the park unit. However, SMMNRA is considered a commuter park, banded on either side by Highway 101 and the Pacific Coast Highway. It is nearly impossible to differentiate between who is heading to the park and who is traveling through, because there are no fee stations into the NRA. Most developed facilities are on the perimeter of the park, so visitor vehicle miles traveled within the NRA are minimal. Therefore mobile source emissions were dealt with as part of the regional air basin.

Applicable statutes, laws, and regulations related to Air Quality include the following:

- **Federal Clean Air Act**

  Requires the Environmental Protection Agency to identify national ambient air quality standards to protect public health and welfare. Standards have been set for six pollutants: ozone (O3), carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), particulate matter less than 10 microns (PM10) and less than 2.5 microns (PM2.5), and lead (Pb).

- **California Clean Air Act**

  Sets ambient air quality standards that are stricter than the federal standards and requires local air districts to promulgate and implement rules and regulations to attain those standards.

State Implementation Plans

Ventura and Los Angeles Countys' air pollution control agencies are responsible for developing a state implementation plan for federal and state pollutants for which they are not in attainment. State implementation plans define control measures that are designed to bring areas into attainment. Basic components of a state implementation plan include legal authority, an emissions inventory, an air quality monitoring network, control strategy demonstration modeling, rules and emission

limiting regulations, new source review provisions, enforcement and surveillance, and other programs as necessary to attain standards. Emission sources are broken into four main categories: stationary, non-road mobile, on-road mobile, and biogenic.

Conformity Rule

In 1993, the Environmental Protection Agency adopted regulations implementing section 176 of the Clean Air Act as amended. Section 176 requires that federal actions conform to state implementation plans for achieving and maintaining the national standards. Federal actions must not cause or contribute to new violations of any standard, increase the frequency or severity of any existing violation, interfere with timely attainment or maintenance of any standard, delay emission reduction milestones, or contradict State Implementation Plan requirements. The conformity rule applies only in federal nonattainment areas. Conformity applies to activities in the SMMNRA because Ventura County exceeds the federal ozone standard and Los Angeles County exceeds federal standards for ozone, carbon monoxide, and particulate matter. SMMNRA conforms to the Clean Air Act because emissions from existing and projected future traffic at the SMMNRA were included in the Regional Transportation Model that was used to develop the Transportation Improvement Plan (TIP) in the Regional Transportation Plan for the greater Los Angeles area. The Regional Transportation Plan is the planning document used by the local air pollution control agencies to demonstrate attainment to the federal Clean Air Act pollutant standards, and conformity.

South Coast Air Quality Management District's (SCAQMD) Rule 403, Fugitive Dust

The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Fugitive dust means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man. The provisions of this rule apply to any activity or man-made condition capable of generating fugitive dust. Examples are on-site mechanical activities related to the building, alteration, rehabilitation, demolition, or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping, or ground breaking. Best Available Control Measures (BACM) represent fugitive dust control actions, which are required within the boundaries of the South Coast Air Basin. A detailed listing of best available control measures for each fugitive dust source type is contained in the most recent Rule 403 Implementation Handbook. SCAQMD provides a list of measures to minimize fugitive dust emissions during construction activities, and the air quality analysis relies on the list to develop mitigation measures appropriate for this project.

SCAQMD Rule 1403 Asbestos Emissions From Demolition/Renovation Activities

The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials (ACWM). All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels,

signs, and markings. This rule is applicable to owners and operators of any demolition or renovation activity, and the associated disturbance of asbestos-containing material, any asbestos storage facility, or any active waste disposal site. In the event that any ACM is found during demolition activities all applicable areas of Rule 1403 will be implemented.

Air quality impacts from projects proposed in the alternatives are considered with respect to whether air pollution is perceptible to the most sensitive people and/or if it causes visibility impairment outside construction site boundaries. Sensitive individuals are considered the very young and old, and people with pre-existing health conditions such as asthma or heart disease.

- ***Negligible*** – Impacts from air pollution caused by proposed activities are unnoticeable above background conditions to the most sensitive individuals.

- ***Minor*** – Impacts from air pollution caused by proposed activities are perceptible above background conditions only to the most sensitive individuals but does not cause adverse reactions.

- ***Moderate*** – Impact is sufficient to cause sensitive people to feel effects of air pollution such as eyes watering and/or coughing, and is starting to cause visibility impairment inside the construction site boundary.

- ***Major*** – Impact results in substantial health effects to sensitive people such as shortness of breath or asthma attacks, and visibility impairment is noticeable outside construction site boundaries.

Soundscapes

No actual noise measurements were made as part of this GMP/EIS evaluation. Instead, noise estimates were made using the FHWA noise-estimating procedure outlined in FHWA-RD-77-108. This procedure estimates traffic noise using the traffic volumes and the number of large and medium trucks in the traffic mix. (See table 11 in the "Affected Environment" chapter.)

The noise estimate locations were selected where traffic noise from a road corridor within the SMMNRA is dominant, and these locations are thus representative of other sensitive receptors within the corridor. The dominant source of noise within the SMMNRA is assumed to come from automobile and truck traffic on the major road corridors. Other noise sources include aircraft flyovers, traffic on minor roads and residential streets within the communities, and construction activities. The estimates in the table indicate that several areas currently have road noise that is near or exceeds the noise abatement criteria of 67 dBA for Category B and 72 dBA for Category C.

The construction noise impact analysis is based on a description of the expected construction activity and its duration, type of equipment used, and proximity to noise-sensitive areas. It is expected that compliance with the City of Los Angeles Noise Ordinance requirements would provide a basis to conclude that temporary impacts associated with project construction activities would not be significant. Noise policies used by agencies having jurisdiction over the proposed actions are summarized below.

- **Federal Regulations**

  The Federal Highway Administration has established noise standards, or "noise abatement criteria" (NAC) for traffic noise on federal highways (23 CFR Part 772). When these criteria are approached or exceeded, noise impact occurs. The metrics used to evaluate noise are the day-night average sound level (DNL) and the energy-equivalent sound level (Leq). The NAC for most sensitive receptors (including parks, residences, schools, churches, libraries, and

hospitals) is an Leq of 67 dBA at the receiver location or the receiver property line.

- **Local Regulations**

The City of Los Angeles Noise Ordinance (Los Angeles Municipal Code Subchapter 112 and 41.4) has noise limits for construction activities. According to this ordinance "no person shall operate or cause to be operated any machinery, equipment, or other mechanical devices in such a manner as to create any noise which would cause the noise level on the premises of any other occupied property to exceed the ambient noise level by more than 5 dBA" (LAMC, Subchapter 112.04).

"Construction and industrial machinery shall not exceed a maximum of 75 dBA at a distance of 50 feet except where compliance is technically unfeasible. Technical unfeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or technique during the operation of the equipment." (LAMC, subchapter 112.05).

LAMC subchapter 41.4 restricts construction activity during specific hours and days. No construction activities shall be performed between the hours of 9:00 p.m. of any one-day and 7:00 a.m. of the following day, or within 500 feet of lands occupied by a residential building before 8:00 a.m. or after 6:00 p.m. on any Saturday, or at any time on Sunday.

- ***National Park Service***

The 2001 NPS Management Policies, Section 4.9 Soundscape Management, directs national parks to preserve, to the greatest extent possible, the natural soundscapes of parks. Natural soundscapes exist in the absence of human- caused sound. The natural soundscape is the aggregate of all the natural sounds that occur in parks, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive, and can be transmitted through air, water, or solid materials.

Some natural sounds in the natural soundscape are also part of the biological or other physical resource components of the park. Examples of such natural sounds include the following:

- sounds produced by birds, frogs, or katydids to define territories or aid in attracting mates
- sounds produced by bats or porpoises to locate prey or navigate
- sounds received by mice or deer to detect and avoid predators or other danger
- sounds produced by physical processes, such as wind in the trees, claps of thunder, or falling water

The NPS would restore degraded soundscapes to the natural condition wherever possible, and would protect natural soundscapes from degradation due to noise (undesirable human-caused sound).

Soundscape impacts from construction activities proposed are considered with respect to the sound disturbance levels such as annoyance, visitor enjoyment, and speech interference in and near noise sensitive areas.

- ***Negligible*** – Impacts from noise pollution caused by proposed construction activities would be unnoticeable above current background noise levels.
- ***Minor*** – Impacts from noise pollution caused by proposed construction activities would be perceptible above background conditions but would not interfere with visitor enjoyment.
- ***Moderate*** – Impact is sufficient to cause annoyance, and visitor enjoyment is negatively impacted.

- ***Major*** – Impact results in annoyance, negative visitor experience, and interference with regular conversational speech.

Soils and Geology

There are no environmental permits related to this discipline.

In assessing the environmental consequences on soil and geologic resources in the five management alternatives, direct and indirect impacts were considered. Direct impacts are defined to occur when effects caused by the action occur at the same time and place (40 CFR 1508.8(a)). An example of a direct impact on soils and geologic resources would be the alteration of a natural slope by grading a level building pad. Indirect impacts are defined to occur when effects that are caused by the action occur later in time or farther removed in distance, but are still reasonably foreseeable (40 CFR 1508.8(b)). An example of an indirect impact on soils and geologic resources would be the increase in erosion of surficial soils resulting from road and pad construction in and adjacent to the project area during grading.

The duration of impacts has also been considered. Temporary (short-term) impacts would occur during the implementation phase of a proposed action. Long-term impacts would occur for the duration of the SMMNRA designation.

The GMP/EIS seeks to avoid or minimize adverse impacts on soils and geologic resources whenever possible. It also seeks to avoid or reduce hazards to the public arising from geologic conditions within the project site resulting from the proposed action. The degree to which the action might adversely affect a resource or create a potential exposure to a geologic hazard is described by the following impact intensity levels:

- ***Negligible*** – Effects that are not detectable and would have no discernible effect on public safety and soil resources.
- ***Minor*** – Impacts are present but are not expected to have an overall effect on public safety or soil resources.
- ***Moderate*** – Impacts are clearly detectable and could have an appreciable effect on public safety and soil resources.
- ***Major*** – Impacts would have a substantial, highly noticeable influence on public safety and soil resources.

Major impacts might arise from projects that impose mass wasting hazards (mudslides, debris flows, and landslides) on other properties, particularly if projects are constructed on or adjacent to slope hazards or earthquake faults. Major impacts on drainage patterns, vegetative cover or erosion rates might involve soil loss or even slope failures during periods of heavy rainfall. Modifications to drainage patterns or erosion rates would result in changes to the long-term and short-term relationships between soil-plant-water patterns.

Cumulative impacts to soil and geologic resources resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are discussed. Details on the analysis of the cumulative impacts are described in the "Cumulative Impacts Methodology" section.

Water Resources

The U.S. Geological Survey, California Department of Water Resources and California Department of Fish and Game regularly monitor water quality in California. These agencies regulate activities affecting water quality through the issuance of water discharge permits and other enforceable orders. The following statutes, laws and regulations for water resources are applied:

- ***Clean Water Act: A National Pollutant Discharge Elimination System (NPDES)*** – is required for all point source discharges of pollutants to surface waters. Storm water

discharges are regulated under this permit. Three general permits have been issued in California to control pollution in storm water including discharges from municipalities, industry and construction activities. A Section 404 permit must be obtained from the U.S. Army Corps of Engineers for the disposal of dredge or fill material in waters of the United States, which includes wetlands.

- ***California Porter-Cologne Act (Chapter 5.5, Division 7 of the California Water Code)*** – Waste discharge requirements are equivalent to a federal NPDES permit and are required for point source discharge of pollutants to surface waters.
- ***Coastal Zone Management Act (CZMA)*** – Portions of the SMMNRA are within the coastal zone. Federally owned lands are subject only to the CZMA. The California Coastal Commission would conduct a consistency review with the CZMA to determine whether or not the specific projects would have significant effects on coastal resources. This consistency review occurs under federal law and is not subject to CEQA.
- ***California Coastal Act (Public Resources Code Sections 30000 et. seq.)*** – A coastal development permit must be obtained from the California Coastal Commission for development activities within the coastal zone, including state coastal waters, that are not on federal lands.
- ***Temporary Construction Permit*** – The State Lands Commission regulates the use of the lands seaward of the mean high tide line on the project site. A temporary construction permit or letter of permission would be required to move equipment across any beaches. A lease would be required for temporary or permanent structures on lands owned by the State Lands Commission.

Potential direct, indirect, temporary and permanent impacts were evaluated to assess the environmental consequences on water resources in the five management alternatives. An example of a direct impact on water resources would be the alteration of a drainage pattern or streambed to accommodate road construction. An example of an indirect impact on water resources would be the increase in pollutants in a stream from spilled automotive fluids adjacent to a new road. Temporary impacts would occur during the implementation phase of the project, short-term impacts would be those that occur for up to one year, and long-term impacts would occur after full implementation and for the duration of the SMMNRA designation. Impacts on unique or rare resources of the area, such as those in proximity to perennial waters, or ecologically critical areas are considered.

The intensity, or severity, of an impact is described as negligible, minor, moderate, or major. The criteria for characterizing impact intensities are described as follows:

- ***Negligible*** – Effects that are not detectable and would have no discernible effect on the hydrology or quality of waterbodies.
- ***Minor*** – Effects on hydrologic processes that are slightly detectable but are not expected to have an overall effect on the character of waterbodies or floodplains.
- ***Moderate*** – Impacts are clearly detectable and could have an appreciable effect on hydrologic processes, the adjacent floodplain, or water quality.
- ***Major*** – Impacts would have a substantial, highly noticeable influence on the hydrologic environment and could permanently alter hydrologic processes, floodplain formation and evolution, and water quality.

Moderate to major hydrological impacts might arise from a project that imposes flood hazards on other properties, results in increased runoff, or decreases area available for aquifer recharge, which might affect well-water supplies. Major impacts on stream hydrology might result from uncontrolled runoff that causes erosion and subsequent sedimentation of downstream water bodies, especially if grading would occur during the rainy season or adjacent to bodies of water or drainageways. Modified drainage patterns might also create substantial changes to streamflow velocities. If a project incorporates extraction of water from an aquifer, a moderate to major effect might result if there would be a net deficit in aquifer volume or a reduction in the local groundwater table level.

Pollution or contamination from projects might result in moderate impacts to human health and safety in addition to affecting plant and wildlife species. Major water quality impacts might result from a project that would directly or indirectly generate any amounts of highly noxious substances, or any substances in large amounts that, while in small amounts are insignificant, are cumulatively hazardous.

Moderate to major impacts on water quality in water bodies might result from moderate to large-scale grading (greater than 2,000 cubic yards per graded acre) within their associated drainage basins, or from projects that cause loss of vegetation on watershed slopes through grading or brush management measures.

Cumulative impacts to water resources resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

Floodplains

The following policies related to floodplains are applied:

- ***Floodplain Management*** – The NPS manages floodplains in accordance with Executive Order 11988, "Floodplain Management" and NPS Special Directive 93-4, (the "*Floodplain Management Guideline*"). In brief, NPS policy is to protect natural floodplain values and functions and to minimize risk to life or property by avoiding the use of the "regulatory" floodplain whenever there is a feasible alternative location. The "regulatory" flood is defined as the 100-year, 500-year, or maximum possible flood depending on the type of activity and the amount of risk inherent in the nature of flooding at a location.
- ***For critical actions (as defined in the "Floodplain Management Guideline")*** – such as schools, hospitals, and large fuel storage facilities, the regulatory floodplain is defined as the 500-year floodplain in non-flash flood areas. When there is no practicable alternative to a floodplain location, NPS policy permits the use of the floodplain when there are compelling reasons for doing so, when the level of impact to natural floodplain processes is acceptable, and when the mitigation is provided to protect human life and property.

Potential direct, indirect, temporary and permanent impacts were evaluated to assess the environmental consequences related to floodplains in the five manage-ment alternatives. Evaluating impacts of the alternatives as it relates to floodplains has been based primarily on avoiding the loss of life and property during major floods. Removing structures from the 100-year floodplain would be considered a beneficial effect on human life or property. Building new structures and increasing the duration

of human activity in the 100-year floodplain would be considered an adverse impact to human life or property.

The intensity, or severity, of an impact is described as negligible, minor, moderate, or major. The criteria for characterizing impact intensities are described below:

- ***Negligible*** – Effects that are not detectable and would not affect human life or property.
- ***Minor*** – Increasing accessibility to floodplains for short duration with no structures or camping (e.g., hiking or riding trails).
- ***Moderate*** – Overnight occupation by a small number of people and a limited number of structures in floodplains would be considered moderate impacts.
- ***Major*** – Construction of multiple structures in floodplains or other features that would increase access to floodplains or encourage activities of extended duration would also be considered as major.

Cumulative impacts related to floodplains resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

Biological Resources and Wetlands

Applicable statutes, laws and regulations for biological resources and wetlands include the following:

- ***Federal Endangered Species Act*** – This act requires federal agencies to consult with the U.S. Fish and Wildlife Service if the agencies determine that their actions would affect any threatened or endangered species. Any incidental take of a listed species would require a Section 7 consultation with the U.S. Fish and Wildlife Service and possibly the National Marine Fisheries Service for incidental take of upland habitats (e.g., beach or sage scrub) occupied by listed species. California Endangered Species Act: Similar to the federal act, this statute requires state and local agencies with discretionary decisions to make on projects to consult with the California Department of Fish and Game if California: listed threatened or endangered species might be affected.
- ***Fish and Game Section 1603*** – Under the *California Fish and Game Code*, Section 1603, administering agencies must obtain a Streambed Alteration Agreement with the California Department of Fish and Game before filling or altering a streambed.
- ***Wetlands*** – The wetland protection mechanisms used by NPS include Executive Order 11990, *Protection of Wetlands*; Director's Order #77-1, *Wetland Protection*, and its accompanying Procedural Manual #77-1; Clean Water Act Section 404; and the "no net loss" goal outlined by the White House Office on Environmental Policy in 1993. Executive Order 11990 requires that leadership be provided by involved agencies to minimize the destruction, loss, or degradation of wetlands. NPS Director's Order #77-1 and Procedural Manual #77-1 provide specific procedures for carrying out the Executive Order. Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act authorize the Army Corps of Engineers to grant permits for construction and disposal of dredged material in waters in the United States.

The biological resources and wetlands section of this document discusses the general impacts and mitigation for each of the proposed alternatives, including the no action alternative.

Potential direct and indirect, temporary and permanent impacts were evaluated to assess the environmental consequences on biological resources and wetlands in the five management alternatives. An example of a direct impact on biological/wetland resources

would be the removal of riparian vegetation or habitat as a result of road construction. An example of an indirect impact on biological resources would be reduced wildlife use of habitat adjacent to a new road due to traffic noise.

Project impacts are considered on unique or rare resources of the area, such as wetlands, perennial waters, or ecologically critical areas. The degree to which the action might adversely affect an endangered or threatened species or its habitat under the Endangered Species Act is also considered.

The intensity of impacts in the biological resource and wetland analysis is defined as:

- ***Negligible*** – Impact is barely perceptible and measurable; remains localized and confined to a single, non-sensitive biological element under discussion, such as a single location, population, process, species, community, or other biological entity. An example would be the removal of ten individuals of a common shrub from the edge of a chaparral-covered slope next to a building.
- ***Minor*** – Impact is perceptible and measurable; remains localized and confined to a single or few elements of a non-sensitive biological element under discussion, such as a single location, population, process, species, community, or other entity that is recognized as relatively common, and that would recover from disturbances in a relatively short time period (years). An example would be the removal of a tenth of an acre of California Buckwheat on the edge of a hillside covered with coastal sage scrub vegetation during the re-grading a previously constructed campground.
- ***Moderate*** – Impact is sufficient to cause a change in character-defining features of a biological element; generally involves a single or small group of elements in a biological community, process, species, or other entity that is moderately to highly sensitive to human development, encroachment, or disturbance, and that would recover from disturbances in a moderate time period (decades). An example might be the removal of a half acre patch of grassland vegetation adjacent to a larger, thirty acre grassland covering a hillside and valley. The small patch, while used for raptor foraging, is not critical to the survival of any species utilizing it.
- ***Major*** – Impact results in substantial and highly noticeable change in character-defining features; involves a large group of contributing elements, or involves an individually significant element with a significantly important ecological role in a biological community, process, species, or other entity that is highly sensitive to human development, encroachment, or disturbance, and that may not recover from the impact within the SMMNRA or region. Examples would include the blockage of a wildlife movement corridor by a building, the removal of a threatened, endangered, or rare species by grading, the disturbance of a critical wildlife corridor between two large habitat patches by a foot trail, or the elimination of the last remnants of a particular habitat, community, process, or other biological entity from the SMMNRA.

The duration of an impact in the biological analysis section is defined as follows:

- ***Temporary*** – Impacts that last only during, or shortly after, construction, such as noise or water runoff patterns during construction.
- ***Short Term*** – Impacts that persist for a season or two, such as the loss of herbaceous ground cover on graded soils.
- ***Long Term*** – Impacts that are longer than two years, including those that persist for the life of the project, and possibly beyond.

Impacts and mitigation measures identified for biological and wetland resources in this document are generalized. Specific impacts and mitigation would be identified in NEPA/CEQA documents for particular projects within the SMMNRA when the projects are identified and the regulatory documents are produced.

Cumulative impacts to biological resources resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

Paleontological Resources

The following statutes and regulations apply to paleontologic resources in the SMMNRA:

- ***Federal Antiquities Act of 1906 (P.P. 59-209; 34 Stat. 225, 16 U.S.C. 432, 433)*** – This act forbids the disturbance of any object of antiquity on federal lands without a federal permit, and establishes sanctions for unauthorized appropriation of antiquities.
- ***National Environmental Policy Act of 1969 (P.L. 91-100; Stat. 852, 42 U.S.C. 4321-4327)*** – This act requires that important natural aspects of the national heritage be considered in assessing the environmental consequences of a proposed project on federal lands, or a project requiring federal entitlement.
- ***Archeological and Historic Preservation Act of May 24, 1974 (88 Stat. 174; Sections 3 (a) and 4(a))*** – This act provides for the preservation of historical and archeological data, which might be lost as a result of federal projects or of federally licensed projects or activities. The noted sections require survey for, and protection or recovery of, objects or data of scientific significance that are threatened by construction projects.

In assessing paleontologic sensitivity of geological formations, and direct and indirect impacts to non-renewable paleontologic resources, standards were employed that are typically used within the community of professional paleontologists, as memorialized by the guidelines of the Society of Vertebrate Paleontology (Reynolds, 1995). For assessing resource potential, the geological literature provides information regarding whether a particular rock unit (formation) is fossiliferous. If the unit is known to be fossiliferous it is assigned sensitivity rating of "high." If the geological unit was formed in such a fashion that fossils might theoretically be preserved but are rare or unknown from that unit, then sensitivity ratings of "low" or "moderate" are assigned, depending on the characteristics of the particular unit. Finally, certain rocks were formed in such a fashion as to preclude fossil preservation, such as granite, and many (but not all) other igneous rocks. These rock units possess no paleontologic sensitivity and project effects on these units would not impact paleontologic resources.

Impact intensity and duration are addressed. Impact duration is described as temporary, short-term, or long-term. Impact intensity is characterized as negligible, minor, moderate, or major depending on the degree of change, area affected, and data potential of the resource. Criteria for intensity characterization is as follows:

- ***Negligible*** – Impact is barely perceptible and not measurable; confined to small areas or a single contributing element of a site with low data potential.
- ***Minor*** – Impact is perceptible and measurable; remains localized or confined to a single contributing element of a site with low to moderate data potential.
- ***Moderate*** – Impact is clearly detectable; generally involves a single or small group

of contributing elements of a site with moderate to high data potential.

- ***Major*** – Impact results in substantial and highly noticeable change, involves a large group of contributing elements and/or significant site(s) with high to exceptional data potential.

Cumulative impacts to paleontological resources resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

Mitigation measures for impacts to non-renewable paleontologic resources are directed at recovering the scientific data and educational values that have been recognized as constituting the intrinsic properties that make these resources important. The controlled recovery of discovered paleontological resources, their preparation, and subsequent curation in a regional repository such as the Los Angeles County Museum of Paleontology, constitutes the recovery of the scientific values represented by those fossils. The Society of Vertebrate Paleontology (Reynolds 1995) and most land management agencies consider scientific recovery to adequately mitigate impacts to paleontological resources in most circumstances.

Qualified paleontologic monitoring would be employed to determine whether excavations or similar activities are, or are not, impacting paleontologic resources. Recovery of discovered fossils in a scientifically controlled fashion, that is, excavation with detailed notes to assure that their stratigraphic context is recorded and that the fossils are treated in such a way as to assure their physical integrity, constitutes the recovery of their potential scientific data and educational values. In all cases it is assumed that recovery would be followed by laboratory preparation of the fossils and curation in a facility where they would remain accessible to scientists and educators.

CULTURAL RESOURCES

Summary of Laws, Regulations, and Policies

All federal actions affecting cultural resources are subject to the provisions of a variety of acts and regulations. The most important of these include the National Historic Preservation Act (NHPA) of 1966, as amended; the NEPA/CEQA; the Native American Graves Protection and Repatriation Act; the American Indian Religious Freedom Act; and the Advisory Council on Historic Preservation's implementing regulations *Protection of Historic Properties* (36 CFR 800), *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (FR 48:44716-40), and *Federal Agency Responsibilities* under *Section 110* of the *National Historic Preservation Act* (FR 53:4727-46).

The GMP process began in 1997 before the Advisory Council on Historic Preservation issued its new regulations on the protection of historic properties. Federal agencies are required to treat all properties over 50 years of age that have not yet been evaluated for National Register eligibility as if they were eligible.

National Park Service Management Policies indicate that cultural resources are to be preserved and appreciation of the resources should be fostered through appropriate programs of research, treatment, protection, and interpretation. Other applicable legislation and regulations and specific management procedures are detailed in *Cultural Resources Management Guidelines* (DO-28, 1998).

Section 106 of the NHPA requires a federal agency to take into account the effects of its undertakings on properties included in, or eligible for inclusion in, the National Register of Historic Places. This also applies to properties not formally determined eligible, but which meet eligibility criteria. The Section 106 process requires the identification of resources that would be affected by a federal proposal, their evaluation under National Register criteria, an assessment of proposed impacts on those resources, and consideration of ways to avoid, reduce, or mitigate adverse impacts. Section 110 of the act requires that federal agencies establish a program to identify, evaluate, and nominate properties to the National Register. It also requires federal agencies to act as necessary to minimize harm to historic properties adversely affected by a federal proposal, and gives the Advisory Council on Historic Preservation (ACHP) a chance to comment.

Methodologies for Analyzing Impacts

Assessment of impacts to cultural resources follows a four-step process outlined in the Advisory Council's revised regulations: (1) identifying the area of potential effect (APE) of the proposed action; (2) comparing that location with the location of resources listed in or eligible for listing in the National Register of Historic Places; (3) identifying the extent and type of impact of the proposed action on National Register properties; and (4) assessing these effects according to procedures established in the Advisory Council's regulations, in order to avoid, reduce, or mitigate adverse effects.

Under regulations of the Advisory Council on Historic Preservation (36 CFR 800) addressing the criteria of effect and adverse effect, undertakings proposed under the alternatives described above have the potential to adversely affect historic properties. Ethnographic resources could be disturbed or destroyed by construction occurring in traditional plant gathering areas, former village sites, and/or places holding special sacred and spiritual significance to American Indians. Historic sites, structures, districts, and cultural landscapes could be adversely affected by undertakings entailing substantial alteration or removal, or the introduction of modern non-contributing development within or in proximity to historic districts and sensitive landscape areas. To mitigate adverse effects, the recreation area would consult with SHPO, ACHP, tribes and interested individuals and groups. Mitigation might include HABS/HAER documentation, salvage historic materials, include cooperative agreement provisions for traditional plant gathering, or other suitable mitigation.

The California Department of Parks and Recreation will assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*.

Many archeological resources having varied potential to yield prehistoric and historic information could be damaged by ground-disturbing activities. To avoid adverse effects to archeological resources, the recreation area would carry out data recovery operations to retrieve important information.

Rehabilitation and adaptive use of historic buildings, restoration of vegetation contributing to historic settings and the cultural landscape, and removal of non-contributing structures and landscape elements would have no adverse effect on historic properties. Rehabilitation would be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

For projects lacking sufficient cultural resource data or design information to adequately assess effects, the recreation area would carry out inventories, evaluate identified resources for National Register significance, and recommend avoidance or appropriate treatment or standard mitigating measures prior to construction disturbances.

Cultural resource impact analysis in this document is described in terminology consistent with the regulations of the Council on Environmental Quality (CEQ). It is intended, however, to comply with requirements of both NEPA/CEQA and Section 106 of the NHPA. CEQ regulations require that impacts of alternatives and their component actions be disclosed. Consistent with CEQ, the analysis of individual actions includes identification and characterization of impacts, including an evaluation of impact duration and intensity. Impact duration is described as temporary, short-term, or long-term. Intensity of impacts in the cultural resource analysis is defined as:

- ***Negligible*** – Impact is barely perceptible and not measurable; confined to small areas or a single contributing element of a larger National Register district of archeological site(s) with low data potential.
- ***Minor*** – Impact is perceptible and measurable; remains localized and confined to a single contributing element of a National Register district or archeological site(s) with low to moderate data potential.
- ***Moderate*** – Impact is sufficient to cause a change in character-defining feature; generally involves a single or small group of contributing elements or archeological site(s) with moderate to high data potential.
- ***Major*** – Impact results in a substantial and highly noticeable change in character-defining features; involves a large group of contributing elements and/or individually significant property or archeological site(s) with high to exceptional data potential.

Archeological resources are typically considered eligible for inclusion in the National Register of Historic Places because of the information they have yielded or may be likely to yield. Intensity of impacts to archeological resources relates to the importance of the information they contain and the extent of disturbance and/or degradation.

Ethnographic resources are considered eligible for inclusion in the National Register as traditional cultural properties when they are rooted in a community's history and are important in maintaining the continuing cultural identity of the community and meet criteria for evaluation and integrity. Intensity of impacts to ethnographic resources may relate to access and use of, as well as changes to, traditionally important places.

The CEQ, moreover, calls for a discussion of the "appropriateness" of mitigation, and the National Park Service's *National Environmental Policy Act Guideline* (NPS-12) requires an analysis of the "effect" of mitigation. The reduction in intensity resulting from mitigation is an estimate of the effectiveness of mitigation under NEPA/CEQA. It does not suggest that the level of effect as comprehended by Section 106 is similarly reduced. Although adverse effects under Section 106 may be mitigated, the effect remains adverse.

The cultural resources portion of this environmental consequences section includes an analysis, cumulative impacts, and conclusion. The analysis section provides a detailed review of impacts that would result from implementation of the actions comprising each alternative. The conclusion section summarized the results of the analysis.

In 1995, the NPS entered into a general agreement with the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Office (SHPO) to cover the treatment of historic properties on NPS-administered lands. Both the California SHPO and the ACHP were invited to participate in the planning process of this project, as stipulated by the October 1995 general agreement. The general agreement provides for a number of categorical exclusions for actions that are unlikely to have an adverse effect on cultural resources. The NPS can implement these actions without further review. The SHPO and the advisory council must review actions not specifically excluded in the general agreement during the planning and design stage, prior to implementation.

Due to historic and social factors, contemporary Native American families, organizations, and groups of Chumash and Gabrielino/Tonga people with clear affiliation to the Santa Monica Mountain area have not yet achieved formal recognition as Tribes by the Federal Government. Therefore, recent directives from Congress and the Executive Branch about "government-to-government" relationship between Tribal and agency officials cannot be fully met with the exception of the Santa Inez Band of Mission Indians whose members have family origins elsewhere within the Chumash native territory. However, National Park Service officials at SMMNRA will continue to conduct discussions, mutual visits, and dialogs in the spirit of the "government-to-government" directives with dignity, due respect for leaders' responsibilities toward their communities, and clarity in written and oral communications.

The collections of the SMMNRA are managed in accordance with the NPS Management Policies, DO-28 Cultural Resource Management Guidelines, and requirements of the Native American Graves Protection and Repatriation Act (1990).

"Direct effects" to cultural resources could be a result of both natural processes and human activities. Activities like road and trail construction, facility development, recreation site construction, and other developments directly affect cultural resources. An "indirect effect" of these activities would be to improve visitor access to the national recreation area, thereby increasing the opportunity for site exposure, vandalism, and theft. The condition of cultural resources, therefore, would be a result of natural forces, management activities, and the interaction of the two.

Cumulative impacts to cultural resources resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

VISITOR EXPERIENCE

The SMMNRA is a unique urban park in that its boundaries enclose a contiguous matrix of public open space interspersed with private development. Visitors can stand on a ridge or in a valley in the SMMNRA without sensing the close proximity of highly developed urban landscapes. The western portion of the SMMNRA is the most removed from the urban influence and the least developed. Although the eastern portion of the recreation area is more developed with over 110,000 people living within the park boundary, more than 90 percent of the land in that area remains undeveloped.

The visitor experience at the SMMNRA could encompass any experience that happens while visitors pass through the recreation area. Every local resident, commuter or visiting tourist driving through the recreation area could be touched by what they learn, feel, and perceive of their Santa

Monica Mountains experience. For many people, simply enjoying the unobstructed expanses of mountains and ocean provides a quality scenic experience – an experience increasingly uncommon in the highly developed Los Angeles area.

As the primary purpose of the recreation area is to preserve the natural and cultural resources of the area while providing for the recreational and educational needs of the visiting public, any proposed action that may have direct, indirect, temporary, short-term, or long-term impacts on visitor experience must be examined and/or mitigated. Direct impacts are those effects that are an immediate result of the proposed action. For example, boat tours directly impact visitor experience by providing a new opportunity within the SMMNRA. An indirect effect occurs as a consequence related to effects of the proposed action, such as increased traffic within the SMMNRA from increased visitor use with development of new facilities. Impacts may be temporary, short-term, or long-term.

The intensity, or severity of impacts are described as negligible, minor, moderate, or major. The following criteria were used to characterize impact intensities for visitor experience:

- ***Negligible*** – Effects are not detectable to the visitor and therefore are not expected to have an overall effect on the visitor experience.
- ***Minor*** – Effects would be slightly detectable, though are not expected to have an overall effect on the visitor experience.
- ***Moderate*** – Impacts are clearly detectable to the visitor and would have a substantial effect on the visitor experience.
- ***Major*** – Impacts would have a substantial, highly noticeable influence on the visitor experience and could permanently alter access to, and availability of, various aspects of the visitor experience.

Cumulative impacts to visitor experience resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

To ensure that visitation does not impair resources or compromise visitor experience, the NPS would comply with the National Parks and Recreation Act of 1978 (Public Law 95-625). If and/or when it becomes apparent that visitor over-use is degrading resources in the SMMNRA, steps would be implemented to stop and reverse such degradation. At such time, in accordance with public law and supporting environmental data, it may be necessary to place limits on visitor numbers. Considering the extensive size and varied opportunities afforded by the SMMNRA, it seems likely that any such limits, if necessary, could be applied locally within specific zones to meet resource management objectives. Specific mitigation measures for adverse impacts to visitor experience are described in the visitor experience impacts and mitigation discussion.

LAND USE AND SOCIOECONOMIC ENVIRONMENT

Land Use

All lands within the SMMNRA boundaries that are not owned by state or federal agencies are subject to local land use permitting by cities and counties. Because the management areas associated with each alternative assume certain types and intensities of land uses, potential impacts related to local land use designation and planning are evaluated. Designated land uses that occur within the SMMNRA and boundary study areas are evaluated with respect to consistency with the different alternatives. Local land use designations

outside of the SMMNRA and boundary study areas would not be expected to be affected by the proposed alternatives.

The designation of management areas within the SMMNRA might influence, to some extent, the decisions that cities and counties make regarding development projects. The designation of management areas based on use intensity may result in inconsistencies with existing land uses and land use designations within city or county jurisdictions. These inconsistencies are considered land use impacts because they could influence the jurisdictions' development patterns to minimize development of incompatible usage types and intensities. The key determining factors differentiating one alternative from another is the extent and intensity of potential recreation area development and public access, and the associated potential alteration of the land under each scenario. The land use analysis assesses the consistency of each of the alternatives, as defined in Table 21 below, with the locally designated land uses. For the purpose of this analysis, detailed land use designations for each of the jurisdictions were consolidated into the categories of commercial, industrial, open space, residential, and agricultural. The inconsistencies are then classified based on the degree of incompatibility of the different uses. In addition, the jurisdictions that would be affected by such inconsistencies are identified under each alternative management strategy to illustrate the localized effects of potential land use inconsistencies. The potential impacts associated with each alternative are characterized using a scale of negligible, minimal, moderate, or major impacts, as follows.

- ***Negligible*** – Impacts would occur if effects were not detectable and would have no discernible effect on land use patterns or land use compatibility.
- ***Minimal*** – Impacts would result if effects were slightly detectable, but would not be expected to have an overall effect on land use patterns or land use compatibility.
- ***Moderate*** – Impacts would occur if impacts were clearly detectable and could have an appreciable effect on land use patterns and result in land use incompatibility.
- ***Major*** – Impacts would occur if effects would have a substantial highly noticeable land use incompatibility or would result in substantial changes to land use patterns.

Table 21 identifies the consistency of each of the prescribed land use management areas with the different designated land uses proposed within each jurisdiction, as illustrated in Figure 14. The land use analysis

Table 21

CONSISTENCY OF NPS PRESCRIBED MANAGEMENT AREAS WITH LOCALLY DESIGNATED LAND USES

	DESIGNATED LAND USE				
NPS Management Zone	Commercial	Industrial	Open Space	Residential	Agriculture
Low Intensity	Inconsistent	Inconsistent	Consistent	Inconsistent	Inconsistent
Moderate Intensity	Inconsistent	Inconsistent	Consistent	Inconsistent	Inconsistent
High Intensity	Inconsistent	Inconsistent	Inconsistent	Inconsistent	Consistent

is based on these consistency findings, and is discussed in detail under each alternative.

Population, Housing and Employment

There are no environmental permits related to this discipline.

The Southern California Association of Governments' socioeconomic projections were used to prepare the sections on existing conditions and projected growth in the region. The SCAG projections, presented in five-year increments, were formulated based on a participatory and iterative process involving all local jurisdictions with land use planning and development permit authority within the SCAG region. The population and housing projections consider the extent of land designated as open space by local jurisdictions due to physical, political and ecological constraints. None of the project alternatives have features that would result in changes to population and housing and therefore no impact intensities are characterized.

Employment impact intensity is characterized using a scale of negligible, minimal, moderate, or major as follows.

- ***Negligible*** – Impacts would occur if effects were not detectable and would have no discernible effect on the local work force.
- ***Minimal*** – Impacts would result if effects were slightly detectable, but would not be expected to have an overall effect on the local work force.
- ***Moderate*** – Impacts would occur if impacts were clearly detectable and could have an appreciable effect on the local work force.
- ***Major*** – Impacts would occur if effects would be highly noticeable and would result in substantial changes to the local work force.

Impacts to employment would be considered temporary for changes to the work force lasting up to one year, short-term for durations from one to three years, and long-term for durations greater than three years. Cumulative impacts to employment resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

Transportation

Early in the planning process the transportation consultant, Robert Peccia & Associates (RPA), consulted with transportation planning representatives of the California Department of Transportation (CALTRANS), the Southern California Association of Governments (SCAG), Los Angeles County, Ventura County and the Santa Monica Mountains National Recreational Area.

Potential impacts of each alternative were estimated using existing and projected traffic volume data obtained from the official regional traffic projection model developed by SCAG. The model assumes that current methods of travel, predominately private automobile use, would continue. The model anticipates only minor shifts toward mass transit or other modes of transportation based on planned transit improvement projects, programs that encourage increased intermodal travel and the use of "intelligent transportation systems" to better manage traffic flows and reduce air quality impacts. The SCAG model takes into consideration all planned land developments and estimates the most likely amount and type of development that would occur within the greater Los Angeles area in the foreseeable future. This regional transportation model is considered to be the best source for future traffic projections within the study area.

Existing traffic volumes were obtained from SCAG. These traffic counts are collected by the various transportation authorities within the study area and compiled by SCAG. Traffic volumes for the year 1998 were used to reflect the existing conditions. Future year projections were obtained from the SCAG regional traffic model. Data for the year 2015 was used for the planning year horizon analysis.

RPA conducted field observations of the traffic operation on all of the roads and intersections within the study area. Turning movement counts were conducted at those intersections where traffic volume changes were anticipated based on a review of the alternatives being considered in the EIS. These turning movement counts were used to analyze the current and future effectiveness of these intersections.

A level of service (LOS) evaluation was conducted according to the procedures outlined in the *Transportation Research Board's Highway Capacity Manual* (HCM) - *Special Report 209* and the *Highway Capacity Software* (HCS) for all the major roadway sections and intersections using the year 1998 volumes and 2015 traffic projections.

Traffic volume data presented in the EIS estimate current and projected future traffic volumes on specific segments of the local road system. The impacts are described in general terms in the following paragraphs. Results are also presented as potential "levels of service" (LOS) along different road segments. Level of service is a widely used system of describing traffic and driving characteristics at different intensities of traffic flow and congestion. These characteristics are described in Table 22.

A similar level of service is applied to the operation of intersections. Several intersections were analyzed to determine the extent of any possible traffic impacts resulting from the actions included in an alternative. The analysis considered potential traffic volume changes and possible changes in the turning movement patterns at each intersection examined. The level of service grading system described above for corridors is similar for intersections. A rating of LOS A is an indication of free flow traffic conditions with minimal intersection delay. Rating of LOS B and C indicate increasing amounts of traffic congestion and intersection delay but are still considered to be acceptable levels of operation. LOS D is an indication of less than desirable delays although the intersection continues to operate with moderate amounts of traffic congestion. LOS E is an indication of operational failure. At LOS E the intersection operation would result in long vehicle queues, major traffic congestion and significant traffic delays. LOS F is a rating that indicates a fully saturated condition and is often viewed as "grid lock."

Traffic impacts caused by the various alternatives are defined for this analysis as the differences between future traffic conditions predicted without changing existing management and future traffic conditions predicted to result from the direction contained in a particular alternative. A change of one level of service is characterized in this analysis as noticeable (e.g., LOS C to D). A change of two levels of service is characterized as considerable (e.g., LOS B to D). A change of three levels of service or more is characterized as major (e.g., Level B to E).

Potential impacts of each alternative were also estimated using existing and projected traffic volume data obtained from the official regional traffic projection model developed by SCAG. This information was used to characterize impact intensity as described below:

- ***Negligible*** – Effects that are not detectable and would have no discernible effect on traffic flow and/or traffic safety conditions.

- ***Minimal*** – Effects that would be slightly detectable but not expected to have an overall effect on traffic flow and/or traffic safety conditions.
- ***Moderate*** – Impacts are clearly detectable and could have an appreciable effect on traffic flow and/or traffic safety conditions.
- ***Major*** – Impacts would have a substantial, highly noticeable influence on traffic flow and/or traffic safety conditions.

Project effects on transportation may be singularly insignificant, but, when considered with other projects in the area, could result in exceeding capacity. Cumulative impacts to transportation resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

Public Services and Utilities

There are no environmental permits related to this discipline.

In assessing the environmental consequences of the five management alternatives on public services and utilities, direct and indirect impacts were considered. Direct effects would include the need to improve, modify or construct additional facilities or hire additional personnel to service recreation area-related activities. Indirect effects would include effects that would result from the alternatives that would result in exceeding the regional capacity of a service or utility. For example, additional wastewater produced by a project could result in requiring an upgrade at a regional pump station that would in turn require additional electricity.

Public services and utilities providers were contacted to determine if new and

Table 22

LEVEL OF SERVICE CHARACTERISTICS OF URBAN AND SUBURBAN ARTERIALS

Level of Service*	Descriptor	Characteristics*
A	Light Traffic	Average travel speed of about 90 percent of free flow speed. Stopped delay at signalized intersections is minimal.
B	Moderate Traffic	Average travel speeds drop due to intersection delay and inter-vehicle conflicts, but remain at 70 percent of free flow speed. Delay is not unreasonable.
C	Substantial Traffic	Stable operations. Longer queues at signals result in average travel speeds of about 50 percent of free flow speeds. Motorists experience appreciable tension.
D	Heavy Traffic	Approaching unstable flow. Average travel speeds down to 40 percent of free flow speed. Delays at intersections may become extensive.
E	Very Heavy Traffic	Unstable flow. Average travel speeds 33 percent of free flow speed. Continuous backup on approaches to intersections.
F	Extremely Heavy Traffic	Forced flow; near gridlock conditions. Average travel speed between 25 and 33 percent of free flow speed. Vehicular backups and long delays, particularly at signalized intersections.

** Source: American Association of State Highway and Transportation Officials 1990*

modified park facilities would require additional public facilities or personnel, or would result in exceeding the regional capacity of a service or utility. This information was used to characterize impact intensity as described below:

- ***Negligible*** – Effects that are not detectable and would have no discernible effect on public services and utilities.
- ***Minimal*** – Effects that would be slightly detectable but not expected to have an overall effect on public services and utilities.
- ***Moderate*** – Impacts are clearly detectable and could have an appreciable effect on public services and utilities.
- ***Major*** – Impacts would have a substantial, highly noticeable influence on public services and utilities.

Project effects on a service or utility may be singularly insignificant, but, when considered with other projects in the area, could result in exceeding capacity. Cumulative impacts to public services and utilities resulting from the effects of other plans and projects combined with the impacts of each of the alternatives are described. Details on the analysis of the cumulative impacts are discussed in the "Cumulative Impacts Methodology" section.

Cumulative Impacts Methodology

Cumulative impacts were evaluated for each resource area on a regional or local basis depending upon the nature of the impact. For the purposes of the cumulative impact analysis, each of the jurisdictions encompassed by the SMMNRA were contacted to collect General Plans and identify specific projects within the area. In addition, government agencies and organizations in the region were contacted to identify projects that were not under the authority of the local jurisdictions. Current general plans and current development within the region were considered in each cumulative impacts analysis. These plans are summarized in the "Environmental Consequences" discussion for "land use". Specific development projects were also considered, as appropriate, for the cumulative impacts assessment for each resource area and are listed in the Appendix under "Specific Development Projects".

Each resource area discussion addresses the context, intensity, duration, and type of cumulative impacts associated with both the direct impacts of the project alternatives, and impacts identified in the additional plans and projects. The context of the impact refers to its geographic area, which is specifically defined for each issue area, and then more generally described as a local or regional impact. Intensities of the impacts are then categorized using the same negligible, minor, moderate, and major scale as defined in each resource area section. The duration of the impact identifies whether the impact would be temporary, short term or long term, and the type of impact specifies whether the effect is a beneficial or adverse impact on the resource area.

The proposed SMMNRA GMP/EIS identifies usage intensity zones within the area boundaries. The plan does not incorporate specific plans for the proposed facilities or the implementation of specific actions. To conduct this cumulative impacts analysis, therefore, potential actions that could occur under each of the project alternatives were analyzed compared to the effects of the no action alternative. However, because of the management focus of the GMP/EIS and the conceptual nature of the alternatives, the cumulative impacts assessment remains necessarily qualitative. As specific actions are proposed, detailed cumulative impact assessments would be conducted in future NEPA/CEQA

documentation to identify specific impacts due to each individual project.

Impairment of National Recreation Area Resources

In addition to determining the environmental consequences of implementing the preferred and other alternatives, NPS policy (*Interpreting the National Park Service Organic Act, National Park Service Management Policies*) requires analysis of potential effects to determine whether or not actions would impair site resources and values. An evaluation of impairment is not required for topics related to visitor use and experience, or land use and socioeconomic environment.

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park/NRA resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park/NRA resources and values. However, the laws do give the National Park Service the management discretion to allow impacts on park/NRA resources and values when necessary and appropriate to fulfill the purposes of a the park/NRA, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within a park unit, that discretion is limited by the statutory requirement that the National Park Service must leave resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgement of the responsible NPS manager, would harm the integrity of NRA resources and values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any NRA resource or value may constitute an impairment. An impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the national recreation area, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the national recreation area. A determination on impairment is made in the "Environmental Consequences" section in the conclusion section for each required impact topic related to the park's resources and values. When it is determined that an action(s) would have a major adverse effect, a justification for nonimpairment is made. Impacts of only negligible, minor, or moderate intensity would by definition not result in impairment.

No Action Alternative

NATURAL RESOURCES

Air Quality

Analysis

The proposed facilities and trail segment developments in the no action alternative would have direct construction-related air

quality impacts near construction sites. Air pollution emissions from construction activities would be generated as fugitive dust, or particulate matter, and diesel exhaust from heavy construction equipment. Air pollution emissions would be mitigated using one or more of the control measures identified in SCAQMD Rule 403, as appropriate (see "Summary of Mitigation Measures Common to All Alternatives" section).

Air quality impacts due to construction emissions would be short-term in nature and would be minor due to the implementation of mitigation measure. Mobile source emission impacts would be negligible because there would be no significant change from existing conditions due to activities within the no action alternative.

Cumulative Impacts

The proposed developments within the SMMNRA would not occur simultaneously and would result in temporary construction-related air pollution emissions, which would add to the existing ambient air pollution in and near construction sites. However, air quality impacts from construction activities would be minor after mitigation.

Conclusion

Facilities and trail segment development without mitigation could results in localized short-term moderate adverse impacts. Sensitive individuals could suffer from adverse health effects and visibility conditions in the park could be impacted. Following mitigation, impacts from construction activities would be minor. There would be no significant changes to the existing mobile source emissions within the SMMNRA from actions proposed in the no action alternative. However, improvements in transit opportunities (park shuttle buses) and the use of alternative fuels in park fleet vehicles would slightly improve the existing air quality conditions within the SMMNRA.

Impacts on the park's air quality would not be impaired by actions proposed under this alternative.

Soundscapes

Analysis

- **Construction Impacts**

  Noise impacts would occur during construction and demolition/deconstruction phases of projects included in the no action alternative. Typical noises during construction activity would include the mechanical noises and peak noise levels associated with construction equipment. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, constitute the most persistent sources of noise during construction projects. The noises associated with operating a D8 Caterpillar Bulldozer (85 dBA, at 50 feet), for example, and various construction equipment, can be roughly twice as loud as an average car. Some construction equipment and activities can produce sounds in excess of 100 dBA, typically in short bursts, but spread over the duration of the project. These effects would be 16 or more times as loud as a typical vehicle.

  Sensitive receptors to noise in the no action alternative include picnic areas and campgrounds, residential areas, schools, hospitals, churches, and libraries. Noise mitigation measures would be used to reduce impacts in noise-sensitive areas as much as feasible. See "Summary of Mitigation Measures Common to All Alternatives" section.

Cumulative Impacts

The largest noise source within the SMMNRA is from traffic using existing roadways. Alternatives considered would not alter the current fleet mix, frequency, or

speed traveled on these roads. Construction projects proposed in the alternatives would not occur simultaneously. However there would be cumulative impacts related to construction noise added to existing traffic and other ambient noise levels in and near construction sites. These impacts would be temporary in nature and would be mitigated to the greatest extent feasible.

Conclusions

Construction noise might result in temporary short-term moderate to major impacts on ambient noise levels in and near construction sites. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, would constitute the most persistent sources of noise during construction projects. Noise impacts sufficient to cause annoyance, negatively impact visitor enjoyment, and/or interfere with regular conversations would occur in short episodes in and near construction sites. The NRA would take action to prevent or minimize all noise that, through intensity, frequency, magnitude, and duration, adversely affects the natural soundscapes and other park resources or values. Specific mitigation measures would be included in all facility development-specific plans.

The park's soundscapes would not be impaired by actions proposed in this alternative.

Soils and Geology

Analysis

- **Soils**

  Proposed facilities and trail segment development within the no action alternative would have direct impacts on soils and geology. These developments, along with proposed improvements to existing facilities, include the coastal education center at Leo Carrillo State Park and rehabilitation of the campground, completion of the Backbone Trail and realignment of a portion of the Juan Bautista de Anza National Historic Trail through the Simi Hills, an accessible trail at Liberty Canyon, expansion of the Cheeseboro Canyon trailhead and the Temescal Canyon educational day camp, development of the Mission Canyon trailhead and day camp at Rancho Sierra Vista, the research and information center at the CSUCI campus, an environmental education day camp at Solstice Canyon, and new access road developments. Adverse impacts of these activities would include the removal and disturbance of soils through construction activities, such as cut and fill, grading, and paving. Removal of vegetation and the surficial soil mantle by surface disturbing activities would result in increased soil erosion and an increased potential for debris flows. Adverse impacts from construction activities are expected to be short-term and minor or moderate without mitigation. These impacts are considered minor or moderate because construction sites would be small and localized, erosion would be limited to construction areas, and construction activities would be intermittent and temporary in nature. If these impacts occur in areas containing non-erodible soils, the effects would be perceptible, although their presence would not have an overall effect on soil resources in the SMMNRA. If, however, such impacts occur in areas with erodible soils, a noticeable effect on area soil resources could occur and moderate impacts would result.

  Increased soil erosion and potential for debris flows could also result from removal and disturbance to soils from fire prevention, fire suppression, search and rescue operations, and trail maintenance activities. Visitor uses, such as camping, could also result in soil erosion. Unplanned fires resulting from visitor use could potentially result in increased soil erosion. These effects

are expected to be minor to moderate because they would occur intermittently and temporarily due to emergency fire suppression activities or unexpected fires and would be limited to affected areas. Erosion due to visitor use would also be limited to the immediate area. Such impacts would be minor in areas with non-erodible soils or low intensities of visitor use because, although perceptible impacts may occur to soil resources due to slight erosion, these impacts would not have an overall effect on soil resources within the SMMNRA. Moderate impacts would be more likely to occur in areas with erodible soils or high visitor use due to the increased soil erosion and the increased potential for noticeable impacts that affect soil resources as a whole within the SMMNRA.

Impacts from increased erosion from fuel management, trail maintenance, and increased visitor use throughout the park are expected to be continual and minor to moderate without mitigation.

Erosion control measures such as sediment retention ponds, silt fencing or slope stabilization techniques would be included in all facility development-specific plans and would be implemented for surface disturbing activities, such as construction or trail maintenance. The SMMNRA agencies would maintain natural landscapes through minimal water use or use of reclaimed water. Adverse impacts on soils from management activities, maintenance, and visitor use would be minimized or avoided through careful planning and enforcement. Visitor management and visitor education would be effective in minimizing many potential impacts. Fire clearance zones would be incorporated into the planning of developments. Educational efforts, such as posting fire hazard signs, should be effective in reducing the likelihood of visitor-caused fires. These measures are expected to reduce potential impacts on soil resources to minor.

Beneficial effects of the no action alternative include decreased erosion and siltation due to revegetating trails in or near sensitive resources., and restoring some roads to a natural condition, or reconfiguring them to low impact trails. Beneficial impacts are expected to be perceptible but would not substantially change erosion patterns in the region because of the localized and temporary nature of erosion from trails and roads in the SMMNRA. Beneficial effects resulting from rehabilitating Leo Carrillo State Park campground would include reduction of streambank erosion and protection of top soil in riparian areas.

- **Geologic Hazards**

Unmitigated geologic hazards could impose potentially major long-term adverse impacts on public health and property after facilities development. The principal hazards within the SMMNRA are ground shaking, landslides, debris flows, and ground failures resulting from liquefaction. These impacts would be considered major because there would be a potential for substantial human safety risk and property loss.

The primary mitigation for geologic hazards relative to proposed facilities development would be to avoid geologic hazard zones through careful siting of facilities and minimizing hazard impacts through careful design and construction practices. All grading and construction plans would be submitted to qualified technical staff within the administering agencies for geologic and geotechnical review prior to approval. A qualified professional would conduct geotechnical and geologic hazard investigations prior to project implementation, with a focus on projects in areas of concern. Such areas include projects involving hillside terrain, proximity to active or potentially active faults, and areas of possible liquefaction. New facilities would be sited to

avoid geologic hazard zones. New facilities and the modification of existing facilities would be designed and constructed in compliance with all applicable state and federal building code standards. The avoidance of geologic hazard zones would reduce impacts to a minor level.

Cumulative Impacts

Proposed developments within the SMMNRA and surrounding areas within the SMMZ would result in soil erosion and increased debris flows from disturbance or removal of soil during construction. Review of available environmental analysis documents for projects such as the Las Posas Basin Aquifer Storage and Recovery Project, and Calabasas Landfill, identified cumulative impacts to soils that were generally minor following mitigation. Adverse impacts to soil resources from the no action alternative would also be minor after mitigation, and are not expected to contribute substantially to cumulative impacts, which would remain minor.

Cumulative impacts to soils may increase as densities of development increase within areas designated for future residential and commercial use. These impacts would be reviewed on a watershed basis in future NEPA/CEQA documentation when facilities included in the no action alternative are funded for site identification/ development, design, and construction.

Facilities development under the no action alternative, and other development projects such as Ahmanson Ranch, New Millenium Homes, Mountain Gate, and Malibu Terrace, would result in increased exposure of people and facilities to geologic hazards. However, despite an overall increase in exposure and risk, the potential adverse effects from other development projects, are generally not interactive. Development at a particular site typically does not increase the risk of adverse effects at other sites.

Conclusions

Facilities and trail segment development without mitigation could result in localized and short-term moderate adverse impacts on soil erosion. Adverse on-going impacts on soils could also result from fuel management, fire suppression, search and rescue operations, and trail maintenance. Visitor uses and unplanned fires could also result in long-term soil erosion. Geologic hazards could impose adverse impacts on public health and property as a result of facilities and trail segment development. Without mitigation, these impacts could be major and long-term. Following mitigation, impacts with respect to soil erosion and geologic hazards would be reduced to minor. Soil resources and exposure to geologic hazards on privately held land would largely depend upon local enforcement of land use and building permits by other local agencies.

The park's soils and geologic resources would not be impaired by actions proposed under this alternative.

Water Resources

Analysis

The proposed facilities and trail/trailhead development (including the education centers and minor new access road developments) for the no action alternative could adversely affect water quality within the SMMNRA. Impacts could include an increase in the runoff volumes and rates from these areas, which could potentially cause streambed and bank erosion, habitat scour, and benthic smothering from the increased flows. In addition, runoff from these areas could contain pollutants such as hydrocarbons and heavy metals from vehicles that are common in road runoff. These pollutants could cause short- and long-term impacts on the health of the aquatic life in streams and rivers. These impacts would be considered minor because

runoff containing pollutants or high levels of sediment would be expected to occur in small quantities, would be intermittent, and would be limited to the immediate area surrounding exposed open roads and construction areas.

Direct short-term minor impacts could occur during construction of the proposed facilities and trail development. Clearing vegetation during construction and grading activities leaves soils exposed to erosion during rainfall, and these sediments could impact the stream turbidity and suspended sediment levels, which could affect light penetration and visibility in the streams. These impacts would be considered minor because runoff containing pollutants or high levels of sediment would be expected to occur in small quantities, would be intermittent, and would be limited to the immediate area surrounding exposed open roads and construction areas. Accidental spills of fuel or other automotive fluids could occur during the servicing of construction equipment. Increased use of unsealed tracks and roads may also result in erosion risks. Impacts from use of unsealed tracks, roads, and other activities associated with increased visitor use and trail management are expected to be moderate. Septic systems that are not properly located, designed, and constructed could also cause moderate impacts to surface or groundwater. These impacts would be moderate because fuel or sewage spills could potentially affect the quality of waterways and water bodies within the SMMNRA. They would occur only intermittently and would be temporary, however, and would be limited to the area surrounding construction sites or septic tanks.

Mitigation of these impacts would be applied in two phases, during construction, and longer term, more permanent measures. Mitigation during construction would be achieved through developing a construction stormwater management plan, which would emphasize careful planning of activities to minimize soil disturbance and recommend on-site temporary water treatments, such as silt fences and sedimentation ponds. These measures retain pollutants on-site and reduce the downstream impacts of construction. The plan would be prepared for all construction activities affecting one of more acres and would include best management practices such as temporary on-site water treatments, such as silt fences and sedimentation ponds. Fueling and servicing of construction equipment would not occur within 100 feet of a waterbody or drainage area unless adequate spill control/containment is provided.

Longer-term mitigation of potential impacts for the proposed facilities and trail development would include some treatment of the runoff from developed areas to reduce pollutants such as toxicants from vehicles or pathogens from restroom facilities from reaching the waterways. A qualified engineer would conduct a soils and engineering evaluation within the administering agencies to support the location and design of all septic system repairs, upgrades, and installations. Permanent mitigation measures would be planned and designed as part of the detailed design of the proposed facilities.

Most adverse impacts on the water resources of the area would be from the high intensity use areas within the recreation area. These areas would contribute more water and pollutants to the natural system. It would be important to employ sufficient mitigation measures to minimize their delivery. Adverse impacts to water resources are expected to be minor after mitigation.

Cumulative Impacts

Proposed developments within the SMMNRA and surrounding areas within the SMMZ would result in increased run-off and impacts to water quality. Review of available environmental analysis documents for

specific projects identified cumulative impacts to water resources. The Ahmanson Ranch EIR reported moderate cumulative impacts involving degradation of Malibu Creek from runoff. According to the EIR, retrofitting existing storm water systems in surrounding jurisdictions would not be feasible, and impacts would remain significant. The no action alternative does not involve facilities development in the Malibu Creek watershed; however, impacts to water resources were identified throughout the SMMNRA from erosion due to use of unsealed tracks and roads. Though impacts would be minor after mitigation and would not contribute substantially to cumulative impacts, cumulative impacts would remain moderate in the Malibu Creek watershed.

Cumulative impacts to water resources may increase in other watersheds in the future as densities of development increase within areas designated for future residential and commercial use. These impacts would be reviewed on a watershed basis in future NEPA/CEQA documentation when facilities are funded for site identification/ development, design, and construction.

Conclusions

The no action alternative would have a minor to moderate adverse impact on water resources from increased runoff, soil erosion, and pollutants. All impacts would be reduced to minor levels with implementation of mitigation measures discussed in the analysis of impacts are employed.

The park's water resources would not be impaired by the actions proposed in this alternative.

Floodplains

Analysis

The major drainages/floodplains in the SMMNRA, as described in the Affected Environment chapter, include Calleguas and Malibu Creeks as well as the Arroyo Sequit stream.

It is expected that the rehabilitation of the Leo Carrillo campground, which is in Arroyo Sequit Canyon, would entail naturalizing the stream and improved natural floodplain processes – natural flood cycles, habitat, depositions, scouring, etc. Capacity would be similar to what currently exists, so increased visitation would not be a factor. The stream tends to flood in the winter, which is the off-season for coastal camping, so visitation would likely be low at this time.

Additionally, this alternative includes areas designated as moderate intensity, such as the accessible trail in Liberty Canyon and the environmental education camp in Solstice Canyon.

Unless infeasible, structures and use areas would be located outside the floodplain boundaries. Facilities and trails within the 100-year floodplain would be closed 24 hours prior to a predicted 50-year, 24-hour storm. NPS would use various warning systems and would patrol use areas within the floodplain prior to and during storms to assure that these areas are not occupied. For example, Ventura County Flood Control District (VCFCD) has operated a flood warning system since February 1979. The system is called "ALERT", an acronym for Automated Local Evaluation in Real Time, which was developed by the National Weather Service. In addition, signs would be provided at the floodplain boundary on trails and access roads alerting park users that they are about to enter an area prone to flooding during wet weather conditions.

Cumulative Impacts

Projects evaluated for the cumulative impacts analysis do not identify development that would alter existing floodplains. Consequently, no cumulative impacts associated with these projects were identified.

Conclusions

The no action alternative could result in potentially moderate long-term impacts to floodplains related to the Leo Carrillo State Park campground. The designation of high intensity use that encompasses the Arroyo Sequit stream floodplain could also result in adverse impacts, depending on facility location. However, given implementation of the mitigation measures described above, adverse impacts to people and property from flooding are expected to be minor (in most of the park lands) to moderate (at Leo Carrillo State Park) over the long term.

The park's floodplain resources would not be impaired by actions proposed under this alternative.

Biological Resources and Wetlands

Analysis

- **Vegetation**

  Facilities development would have direct impacts on vegetation. These developments, along with proposed improvements to existing facilities, include the coastal education center at Leo Carrillo State Park campground and rehabilitation of the campground, completion of the Backbone Trail, environmental education day camps at Solstice Canyon and Temescal Canyon, the day camp at Rancho Sierra Vista, expansion of the Cheeseboro Canyon trailhead, development of the Mission Canyon trailhead, the accessible trail at Liberty Canyon, the research and information center at the CSUCI campus, and new access road developments. The specific biological resources affected by the development of projects within this alternative would be presented in separate NEPA/CEQA documentation prepared for each project, although some general consequences may include the impacts discussed in the following paragraphs and sections.

  Minor adverse impacts of these activities could include the removal and disturbance of natural vegetation through construction activities, such as cut and fill, grading, and paving. Although development of new facilities would occur within areas with vegetation that have already been disturbed, some areas may support fringes of chaparral or coastal sage scrub vegetation that may need to be removed during grading of the sites. These impacts would remain minor because such removal of natural vegetation would be localized and confined to areas where constraints prohibit other options or another placement of the facility. If construction areas should potentially support sensitive plant or wildlife species, appropriate consultations with the USFWS and CDFG would be conducted during the planning stages of the projects and, if appropriate, agreed upon mitigation would be implemented as conditions of the projects.

  Removal of vegetation by surface-disturbing activities could also result in increased soil erosion (see soils and geology) that can, in turn, adversely affect off-site vegetation and increase siltation in downstream watercourses. Such siltation could inhibit or prevent the transport of oxygen to the roots of riparian vegetation, such as willow trees in stream bottoms, leading to a decrease in the health or death of the riparian systems. Such an effect, if unmitigated, could be negligible to major, depending upon the amount of vegetation affected, slope of the site, and nature of the downstream riparian community. Negligible impacts would occur if effects remain localized or affect only non-sensitive species. These impacts would increase to major levels if erosion affects a large number of highly sensitive species, or if a large extent of species present is affected. Because development of new facilities would occur in areas that have already been disturbed, the

effect on the site itself could be negligible, whereas the effect on downstream riparian vegetation – including the elimination of the riparian vegetation – could be a major impact. Disturbance or removal of vegetation on slopes also increases the potential for debris flows, which could dramatically remove or alter plant communities, especially those within downstream watercourses.

The effects of newly created edges between habitats can be expected adjacent to developed facilities. Edge effects are changes within a "zone of influence" between habitats that may vary in width, depending upon what is measured. The intensities of edge effects frequently are dependent upon the sizes and shapes of the disturbed areas and the lengths of the edges between the habitats. These effects could include changes in abiotic factors such as temperature, relative humidity, penetration of light, and exposure to wind, each of which could affect the presence or distribution of species within the area. Biotic changes due to edge effects could include, among others, elevated plant mortality, depressed migratory bird usage and breeding near habitat margins, or increases in insect species diversity (Soule 1986, Meffe and Carroll 1997). For projects within the SMMNRA, the size and extent of such edge effects, if any, would be analyzed in additional documentation prepared for each project. Effects would likely be negligible to minor in intensity because siting of the projects would be limited to areas that have been previously disturbed, minimizing the potential for impacting large areas of critical or sensitive species.

Adverse impacts on vegetation could also result from fuel management, fire suppression, search and rescue operations, and trail maintenance. For example, Los Angeles County regulations require a 200-foot fire suppression zone around structures built within chaparral vegetation. Natural vegetation is removed and replaced with fire-retardant landscape species from an approved plant palette. The intensity of this impact depends upon the size of the development area and its shape. These fire suppression zones would be permanent. These activities could also have adverse effects on vegetation similar to those of facilities development and road construction, but because of their reactive nature, frequently could not be readily attuned to sensitive biological resources. Examples of impacts would be the removal (burning) of vegetation in backfire areas, or removal of vegetation in areas where temporary flow/erosion control structures would incidentally displace riparian vegetation during storms.

During these emergency activities, the loss of habitat or individuals of sensitive plant and animal species may be unavoidable. These emergency actions could create negligible to major impacts, depending on the extent of sensitive species that would need to be replaced, as described above. However, during routine planning for fuel management and trail maintenance activities, adverse effects on sensitive vegetation would be avoided or mitigated to minor through avoidance or revegetation.

Visitor uses, such as camping, could also result in soil erosion and disturbance or removal of vegetation. For example, campers may dig tent trenches, create ad hoc paths around campsites, or cut wood or brush around campsites, even if these activities are discouraged or prohibited. Minor to negligible changes in vegetation around campsites could be attributed to these activities because they may sometimes result in perceptible changes to areas, but remain localized. Unplanned fires resulting from visitor use have the potential to alter plant communities in extended areas around the camping area. The effects of such fires

could inadvertently remove (burn) vegetation supporting sensitive plant and animal species. The intensity of this unplanned impact could range from minor to major, depending upon the location and extent of such fires, the season in which they occur, and the fire history of the vegetation. Major impacts may occur if extensive fires affect sensitive species that are not fire resistant. Minor impacts could result, however, if the habitat ecology is resistant to fire, or if only localized areas of non-sensitive species are affected.

Beneficial effects of the no action alternative include plans to close, reroute, and revegetate trails in or near sensitive resources, and to remove or restore some roads to a natural condition, or reconfigure them to low impact trails. Beneficial effects would also result from rehabilitating the Leo Carrillo State Park campground to educate visitors of the sensitive nature of riparian areas. Also, highly sensitive natural areas would be protected and alien plant species would be eradicated.

The primary mitigation for proposed facilities development would be the careful siting of facilities to avoid undisturbed native vegetation. New development would be sited in previously disturbed areas, which would normally support stands of exotic vegetation, thereby avoiding or minimizing impacts on undisturbed native vegetation. Areas of vegetation that have been previously subjected to ground-disturbing activities frequently support exotic vegetation that has adapted to the changed site conditions. Ground-disturbing activities frequently interrupt natural successional processes of vegetation and alter the topography of a site, which often promote the competitive success of exotic plant species over native species. Such disturbances, which often dramatically change the physiognomy (physical arrangement) of vegetation, can alter habitat characteristics so that they are no longer suitable for native wildlife species, but, instead, favor a suite of exotic wildlife species. When not subsequently treated with a revegetation program, and when left to natural processes, such areas of disturbed soil and vegetation frequently require decades to recover – if they ever do – to their more natural habitat conditions. The siting of SMMNRA facilities at previously disturbed sites would place newly developed facilities in areas with the least effects on native biota.

To ensure that all facilities are sited in appropriate areas, all grading and construction plans would be reviewed by a qualified individual prior to submission to the administering agencies for approval. Areas temporarily disturbed during construction would be recontoured and revegetated with appropriate native plant species, and appropriate fuel management zones would be maintained around developed structures. Erosion control measures would be implemented for surface disturbing activities, such as construction or trail maintenance. For example, temporary sediment basins or site fencing could be installed at construction sites to protect downstream riparian vegetation, or (rice) straw bales could be secured to temporarily shore up eroded areas on trail switch backs to provide opportunity for native plants to re-establish themselves. Pre-project surveys would be conducted by a qualified biologist prior to project implementation in the appropriate season to determine presence of listed species, as well as other species of federal or state concern.

Projects sited in areas that may support any sensitive species listed in Table 13 would require pre-project surveys, conducted according to standard biological techniques and protocol for the sensitive species. For example, protocol surveys would be conducted between March 15 and July 1 to establish the presence or absence of certain

species in habitat areas, particularly those that may potentially support riparian vegetation habitats for populations such as the arroyo southwestern toad The administering agencies would consult with the USFWS and CDFG during the detailed planning phase of a project, if the arroyo southwestern toad or any other listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, FESA Section 7, or CWA Section 404/401 processes.

Monitoring by a qualified biologist would be required for surface disturbing activities in, or in close proximity to, sensitive vegetative resources (e.g., wetlands, listed species habitat). Best management practices would be implemented during construction. For example, temporary sedimentation retention basins could be required on some projects if construction would occur during the rainy season, or the servicing of construction vehicles could be prohibited within 100 feet of riparian corridors. Or, construction staging areas would be established and staked to avoid disturbances of native vegetation or the root zones of oak trees. Impacts could be avoided by siting developments in areas of previous disturbance. Such measures would ensure that impacts to biological resources due to construction would be avoided or otherwise mitigated, or that any effects would be negligible.

Adverse impacts on vegetation from management activities, maintenance, and visitor use would be minimized or avoided altogether through careful planning and enforcement. Designing for carrying capacity for a site and visitor education programs, which would be developed and presented in the NEPA/CEQA documentation for appropriate facility projects, would be effective in minimizing many potential impacts. For example, emphasis within various educational programs could be placed on the importance of hikers remaining on established trails to prevent the trampling of vegetation or the creation of new erosion gullies. Or, educational programs could stress the importance of fire prevention and the effects of unplanned fires on biota, or the importance of maintaining low impact zones within the park for the long-term preservation of biotic resources. Additional educational efforts, such as trail markers, educational pamphlets, and fire hazard signs, would be used to reduce the likelihood of improper trail use, visitor-caused fires, and their resultant impacts. Fire clearance zones would be incorporated into the planning of new facility developments. If vegetation were to be inadvertently lost or disturbed from any visitor-related activity, the area would be rehabilitated or revegetated with species from an appropriate native plant palate using local seed/plant sources and/or would be considered for closure.

The examples of mitigation measures noted above, and others specifically designed for each project, would minimize loss of vegetation in the SMMNRA. Long-term loss of currently vegetated, natural areas would be minor as a result of the no action alternative. The long-term health of vegetation on privately held land would partially depend upon local enforcement of land use and building permits by other local agencies. These agencies include the Los Angeles County Department of Regional Planning, which administers 12 significant ecological areas primarily on private lands within the Santa Monica Mountains, but which are outside the jurisdiction of the SMMNRA.

- **Wildlife**

Facilities development and trail development would have direct, localized impacts on some

wildlife species. Any grading or ground-disturbing activity may kill individuals of common or sensitive species, including numerous invertebrates and vertebrates listed in Table 12. Such an effect would be localized, but, in the case of rare, threatened, or endangered wildlife, could have from minor to major impacts on survivability of the species on a local, regional, or global scale. Minor impacts would occur if only a small, localized portion of the sensitive population is affected because such effects would not substantially alter the ability of the species to survive in the area. These impacts would increase to major intensities, however, as more widespread or higher proportions of the populations were affected, thereby affecting the ability of the species as a whole to thrive in the region.

Removal of habitat, such as vegetation or soil components, could indirectly affect wildlife populations. The intensity of this impact would range from negligible to major depending upon factors such as the amount of habitat removed or disturbed, the location of the habitat and disturbance, the season in which the disturbance occurs, or the methods by which the disturbance is created. The intensity of impacts on the Santa Monica shieldback katydids (invertebrate species) listed in Table 12, would likely be very different than on mountain lions because of their general ecological differences and requirements. Placing a trail through a riparian area could result in negligible impacts for katydids and major impacts for mountain lions, since mountain lions depend on riparian areas for cover and water sources, while katydids are much smaller and less affected by human trail activity.

In another location, or for another action, the opposite intensity of impacts could occur. For example, beneficial effects of the no action alternative include plans to close, reroute and revegetate trails in or near sensitive resources, and to remove or restore some roads to a natural condition, or re-configure them to low impact trails. In this example, major beneficial effects on mountain lions are feasible because less trail activity surrounding water sources would protect mountain lion access to water and cover in riparian areas. Impacts on katydids are likely to be negligible, however, since they are relatively unaffected by trail activity.

Individual members of small mammals, birds, reptiles, and amphibians may be temporarily displaced by construction activities. Because many species of vertebrates, such as kangaroo rats and passarine birds, defend established territories, the movement of displaced individuals from construction sites into the adjacent habitats could be disruptive to existing populations around the construction sites. The successful defense of territories is frequently linked with reproductive success in many such species. Thus, the territories of adjacent populations could be adversely affected as displaced wildlife attempt to inhabit off-site areas where other individuals are already established. If a site involves an impact on sensitive species listed in Table 12 (rare, endangered, and threatened animals), the intensity of this impact would range from negligible to major and would depend upon such factors as the amount of habitat removed or disturbed, the location of the habitat and disturbance, the season in which the disturbance occurs, or the methods by which the disturbance is created. Negligible or minor impacts would occur only if a small portion of habitat is affected or if construction / disturbance occurs during non-breeding seasons, and individuals or populations are not noticeably affected.

Major impacts could result, however, if a large proportion or critical area of the population is affected or if disturbance occurs during breeding seasons such that the viability of the population is threatened. In addition, major impacts could occur if

sensitive or endangered species are impacted, even to a small extent. Although there is minor potential for a local reduction in the habitat available for endangered, threatened, rare or sensitive species of wildlife, if vegetation and wildlife habitats are committed to permanent development, then projects planned by the NPS would be developed in areas that were previously disturbed. This would further reduce the potential for the impacts of displacement to occur. Consultation during the planning process for any projects with a potential impact on sensitive animal species would be conducted with the USFWS and CDFG with the goal of avoiding, mitigating, or reducing any such impacts to a negligible level.

Construction activity and noise may be disruptive to animal populations in the habitats adjacent to development sites. The activities and noise may bring about changes in the foraging and breeding behavior of sensitive birds listed in Table 12, for example, that are nesting in adjacent vegetation. This may cause a reduction in the breeding success of these sensitive species. The intensity of this impact would depend upon such factors as the amount of habitat disturbed, the location of the habitat and disturbance, the noise levels of construction activities, the durations of the disturbance, the season in which the disturbance occurs, or the methods by which the disturbance is created. In general, such disturbances would be localized around the perimeter of the project site, and therefore of negligible to minor intensity. The intensity could be moderate to major if construction activities occur in critical (e.g., breeding) seasons in areas where a project site is adjacent to habitats, such as some riparian areas, that may support sensitive species.

Visitor uses, such as hiking, horseback riding and mountain biking, could have both direct and indirect adverse effects on all classes of wildlife, especially in areas where sensitive resources are supported. Direct effects include disturbance of soils supporting vegetation, trampling or removal of vegetation, and disturbance of wildlife behaviors and habitats, especially for species that are sensitive to the presence of humans. Indirect effects from visitor use could include, for example, disruption of wildlife activities because of noise at campgrounds or along trails and wildlife corridors.

Of particular concern is wildlife access to water sources. Most large mammalian species depend on access to fresh water streams, springs, or ponds for drinking. These areas, especially when they are in short supply, could also be the focus of foraging predators. When animals are using such drinking areas, they are accordingly more vulnerable to predation and have a heightened sense of caution. These species include both predator and prey, including mule deer, mountain lion, and intermediate sized predators (e.g., bobcat, coyote, and gray fox). These species are particularly sensitive to human activity near water sources and they might avoid water sources as a result of visitor activity. Disturbances of animals by human activities could affect both the success of hunting and the vulnerability of being taken as prey. This is especially critical during the drier seasons of summer and fall. Currently, visitor use is year-round. These impacts could range from minor to major, depending on levels of visitor use and proximity to sensitive resources. Minor impacts ware expected in low intensity use areas and where disturbance is away from sensitive areas. Major impacts would occur in high intensity use areas where sensitive species are present.

Construction monitoring by a qualified biologist in areas supporting sensitive wildlife would reduce or prevent some impacts. Pre-project surveys would be conducted prior to project implementation in the appropriate season for listed species, as well as other species of federal or state concern (see

Table 14). A qualified staff member of the administering agency would review all grading and construction plans prior to approval. The administering agencies would consult with the USFWS and CDFG during the detailed planning phase of a project, if any listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, FESA Section 7, or CWA Section 404/401 processes. Undisturbed native vegetation would be avoided when new facilities are sited.

Areas temporarily disturbed during construction would be recontoured and revegetated with appropriate native plant species. Appropriate fuel management zones would be maintained around developed structures. Erosion control measures such as sediment retention basins, silt fencing, or slope stabilization techniques, would be considered and implemented for surface disturbing activities, such as construction or trail maintenance. Monitoring by a qualified biologist would be required for surface-disturbing activities in or near sensitive wildlife resources (e.g., listed species habitat). The monitoring activities would ensure that agreements and conditions established during consultations with the resources agencies, along with other biological terms and conditions established during project approvals, are followed during construction.

Examples of such conditions include ensuring that construction noise levels are kept below a specific level at established contours away from the construction zone; ensuring that machinery and personnel remain within the boundaries of the project site and established staging areas; and ensuring that construction does not occur during the breeding season of least Bell's vireo adjacent to a riparian corridor supporting nesting birds. As established during consultations with the resource agencies, and as specified by reviewing agency policies and local ordinances, monitoring of the site by a qualified biologist during construction would ensure that best management practices would be implemented during construction.

Visitor use management and education would be effective in reducing many indirect impacts on wildlife. For example, routing trails away from sensitive biological habitat areas would reduce noise impacts on, and hiker intrusions into, sensitive habitats. Policy provisions to prevent overnight uses in low intensity use areas would preclude camping near wildlife water sources used by nocturnal mammals.

- **Habitat Connectivity**

As with vegetation, proposed facilities development would have direct impacts on habitat connectivity. Any loss, disturbance, or degradation of vegetation in habitat linkages and wildlife movement corridors could potentially have an adverse impact on an area's value as wildlife habitat. For example, the placement of facilities along riparian corridors, on hilltop ridgelines, or in other linear landscape features utilized by predators such as mountain lions, or prey, such as deer in their daily or seasonal movements, could cause the animals to alter their movement patterns to avoid humans. Such impacts would vary from minor to major, depending upon factors such as the size of the development, the amount of human activity taking place in the development, and the sensitivity of each species to human presence. Large facilities or high-use trails could lead to major impacts for animals sensitive to human activity, such as deer or mountain lion, while minor impacts could occur if facilities or trails are small and

experience low use, or are located in areas without sensitive animals.

Habitat linkages and wildlife movement corridors have been identified in various studies of the region, including constrained areas where limited opportunity is available for safe wildlife movement across major roadways and developed areas. One major habitat connection of regional importance connects the Santa Susanna and San Gabriel Mountains north of SMMNRA to the Santa Monica Mountains through the Simi Hills. Pending legislation will include upper Las Virgenes Canyon and Liberty Canyon in the SMMNRA boundary, which are vital portions of this wildlife corridor. Local habitat connections tend to follow canyon bottoms (riparian habitats) and ridgelines (upland linkages), often with interconnections with other such corridors. Large expanses of open space serve the same function for many small species, such as lizards and rodents, but this function is less obvious to human observers because the species are less easily observed and the habitat is much larger in comparison to their size. Loss of habitat connectivity leads to habitat fragmentation and gradual loss of small isolated wildlife populations.

Some wildlife species, such as many birds, could use archipelago (steppingstone) linkages, but, without safe passage areas, most terrestrial species, such as bobcat, rodents, amphibians, or reptiles, cannot. Thus, the placement of facilities within riparian areas, on ridgelines, or other linkage habitats could interrupt habitat connectivity for larger species, but also for numerous smaller wildlife species. The intensity of corridor impacts generally would be major for the larger species, while only moderate to negligible for smaller species. This difference could be attributed to the increased cover and corridor size required for larger mammals, while smaller species could more easily avoid human activity along a corridor. However, documentation for impact intensities on sensitive species would be addressed in NEPA/CEQA processes when projects are proposed and planned, and appropriate avoidances and mitigations would be implemented with the goal of reducing potential impacts to minor.

The primary mitigation to offset impacts from new development would be to avoid sensitive habitats and habitat linkage areas through careful project siting. A qualified biologist in the administering agencies would evaluate all proposed actions for their effects on habitats and on habitat connectivity to avoid or mitigate further habitat fragmentation. New developments would be excluded from existing wildlife corridors, or minimized to the greatest extent practicable, to ensure the continued exchange of genes and individuals between wildlife populations within and adjacent to the SMMNRA.

Degraded habitats within conserved linkage areas would be restored. For example, narrow approach areas previously cleared of cover near highway wildlife undercrossings could be widened, revegetated, or otherwise enhanced with appropriate cover. The most effective means of maintaining habitat connectivity is through the maintenance of sufficiently wide (greater then 400 feet) habitat linkages between major blocks of habitat. Whenever possible, documented wildlife movement areas would be improved with the appropriate NEPA/CEQA documentation prepared for that project.

- **Wetlands**

Where existing facilities require long-term maintenance. or enhancement, there is a potential for impacts to wetlands associated with infrastructure repair and improvements (water, sewer, roads, trails) crossing drainages to reach the facilities. Siting of this infrastructure would avoid and minimize impacts to wetland resources wherever practicable. Existing disturbed areas

within the drainage reach associated with the facility would be used where practicable. Opportunities to restore and enhance disturbed wetland resource areas adjacent to upgraded facilities would be identified during the site design process. The 404/401 and 1603 wetlands permitting processes to be conducted as necessary during the design process would also emphasize avoidance or mitigation of wetland impacts. Impacts to wetland resources associated with the no action alternative would be mostly associated with road improvements. These impacts are anticipated to be minor to moderate and short term due to the short-term nature of expected impacts and the possibility of habitat recovery within a relatively short period of time.

Cumulative Impacts

Development of substantial private and local government projects on privately and publicly held lands within the SMMNRA and SMMZ would continue to decrease the amount of available habitat for biological populations. These private and local government projects, along with those developed by the NPS, CSP, and SMMC, would continue to accumulate adverse effects on biological resources within the SMMNRA boundaries. Review of environmental analysis documents for projects such as Ahmanson Ranch and Las Posas Basin Aquifer Storage identified minor adverse cumulative impacts to biological resources and/or wetlands. Recreational uses of the SMMNRA would continue to disturb some wildlife species. However, implementation of the management plan would have a beneficial effect on regional biological resources. Cumulative impacts in the area would therefore remain minor, with the largest adverse impacts coming from private projects.

To the extent possible, the resource agencies would work to share information with local governments, developers and landowners to minimize impacts when possible. The administering agencies would help initiate and fully participate as responsible agencies with federal, state, and local agencies, and other interested parties (private landowners and environmental organizations) in a subregional conservation planning process, such as the Natural Communities Conservation Planning (NCCP) program managed by the CDFG.

Conclusions

Moderate to minor potential impacts on common plant communities and vegetation are expected from proposed facilities development, including the removal and disturbance of vegetation through construction activities, such as cut and fill, grading, paving, and trail development/improvements. Minor to negligible impacts on sensitive plants species and wetlands would be expected because facilities would be developed in areas that were previously disturbed. Negligible to major indirect effects would include invasion by exotic plant species into newly disturbed areas and the elimination or alteration of some wetlands and riparian vegetation in streambeds. A variety of edge effects, such as noise and lighting disturbances to wildlife and losses of vegetation from foot traffic, could be expected within an interface zone of existing and future facilities having relatively high human usage. Negligible to major adverse impacts on vegetation could also result from fuel management, fire suppression, search and rescue operations, and trail maintenance.

Beneficial effects of the no action alternative include plans to close, reroute and revegetate trails in or near sensitive resources and to remove or restore some roads to a natural condition or reconfigure them to low impact trails. This would avoid or reduce the risk and intensity of

potential impacts on sensitive species near these installations to a minor level.

Minor to negligible direct impacts on wildlife would be expected from facilities development. Direct effects would generally be localized on wildlife species. Visitor uses, such as hiking, horseback riding, and mountain biking, could have both direct and indirect, adverse effects on wetlands and all classes of wildlife especially if these uses occur in wildlife corridors and linkages. Proposed facilities development could have potentially major direct impacts on habitat connectivity if movement corridors cannot be avoided. Mitigation through revegetation and avoidance would reduce each of these impacts to minor or negligible levels.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national recreation area's establishing legislation, (2) key to the natural or cultural integrity or opportunities for enjoyment of the national recreation area, or (3) identified as a goal in this general management plan or other relevant NPS planning documents. Consequently, the NRA's biological resources and wetlands would not be impaired by actions proposed under this alternative.

Paleontological Resources

Analysis

The no action alternative includes facility developments that are proposed for previously disturbed areas. Nevertheless, construction activities could affect previously undisturbed sediments possessing moderate to high paleontologic sensitivity. Limited disturbance of deposits with moderate to high paleontological potential would result in a perceptible impact that would be considered a moderate adverse impact to paleontologic resources. Grading as part of fuel management and fire suppression could also result in moderate potential impacts. Direct, short-term impacts resulting from these activities would include the disturbance and removal of in situ fossils, including restoration efforts when those efforts involve excavation. A long-term adverse impact would be the exposure of previously buried fossiliferous sediments to weathering by trail improvements, such as completion of the Backbone Trail.

Increased visitor use would also adversely affect paleontologic resources through unauthorized collection and consequent loss of the scientific and educational potential of those resources. This impact is anticipated to be minor because facilities and high use intensity areas would be likely to encompass only limited deposits with moderate to high paleontological potential because of their location in previously disturbed areas and the limited public access to such sites within the SMMNRA.

Mitigation of these impacts would include comparing grading and construction plans with geologic maps by a qualified professional during the administering agencies' geological and geotechnical review to determine the paleontologic sensitivity of affected sediments. Facilities would be sited away from known paleontological resource locations. If excavation occurs in sediments that have high to moderate paleontologic sensitivity, monitoring by a qualified paleontologic monitor would occur during excavation. If fossils are discovered, then construction would halt in the immediate vicinity of the find until they were removed in a scientifically controlled fashion by a qualified paleontologist. Recovery of the scientific data potential of the fossils would reduce impacts to a minor level. Additional mitigation measures would include public education implemented by the administering agencies regarding the scientific and

educational importance of fossils, and promoting enhanced awareness of enforcement of California State and NPS non-collection policies.

Cumulative Impacts

Proposed developments in the SMMNRA and SMMZ may result in disturbance or removal of fossils. Review of environmental analysis documents for projects such as the Calabasas Landfill identified minor cumulative impacts to paleontological resources. Impacts to paleontological resources from the no action alternative would also be minor after mitigation, and are not expected to contribute substantially to cumulative impacts, which would remain minor.

Conclusions

Proposed facility developments could affect previously undisturbed sediments possessing moderate to high paleontologic sensitivity, resulting in moderate adverse impacts to paleontologic resources. Increased visitor use would also adversely affect paleontologic resources through unauthorized collection and consequent loss of the scientific and educational potential of those resources. This impact would be minor. The mitigation measures discussed in the analysis of impacts section would reduce the impacts on paleontological resources to minor.

The park's paleontological resources would not be impaired by actions proposed under this alternative.

CULTURAL RESOURCES

Analysis

Management of the SMMNRA would continue under current policies and guidelines in the no action alternative. The increasing levels of visitation that current trends predict would make the recreation area's cultural resources more susceptible to degradation through the physical impacts of casual use. However, the development of stewardship programs could limit the destructive effects of vandalism through increased public involvement and awareness. In addition, continuing enhancement of the interpretive/educational components of the SMMNRA's cultural resource management program, as funding allows, would increase public sensitivity to the importance of the resources, and potentially limit such degradation by instilling a greater understanding and appreciation of the resources, and encouraging avoidance where feasible.

The interpretive/educational outreach of SMMNRA, which includes conducting programs for schoolchildren, would be enhanced as funding allows, incorporating more information and values about cultural resources in the curriculum. This would help build an enlightened constituency that would benefit the recreation area and resource preservation in the future, as well as promote sensitivity regarding respect for traditional Native American Indian and historic lifeways.

The NPS would continue to work with neighboring landowners and jurisdictions to ensure, to the extent practicable, that adjacent land management practices do not impair the SMMNRA's cultural and scenic resources.

- **Archeological Resources**

  Archeological resources would be protected from the effects of development and visitor use where possible; however, sites would remain susceptible to natural deterioration, inadvertent damage by human activity, and vandalism in areas further removed from the purview of recreation area staff. Some sites would eventually be lost. Further deterioration or destruction of archeological sites in the recreation area by human activity would result in the loss of resource values

associated with the prehistory and history of the region. Such impacts are expected to be negligible, because this alternative would not increase public accessibility to archeological sites in the SMMNRA. With appropriate mitigation, these impacts could be further reduced.

To ensure that adequate consideration and protection are accorded archeological resources, record searches and, where appropriate, archeological surveys conducted by a qualified archeologist would precede all ground disturbing activities on recreation area lands. Archeological and Native American Indian monitoring would occur by a qualified archeologist where ground disturbance is expected in the vicinity of known or suspected cultural resources. If cultural materials were unearthed during construction activities, all work in the immediate vicinity of the discovery would be halted until the resources could be identified, their significance assessed and any necessary mitigation undertaken. Potential mitigation measures could include avoidance, preservation, or data recovery. If construction impacts on federal lands upon archeological sites cannot be avoided, the California State Historic Preservation Office, the Advisory Council on Historic Preservation (ACHP) and concerned Native American Indian groups would be consulted by the administering agency in the development of mitigation strategies.

If human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered on federal lands during facilities or trail improvements, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed.

- **Historic Structures**

No direct impacts to the three historic structures within the SMMNRA's boundaries that are listed in the National Register of Historic Places would result from the implementation of the no action alternative. Although visitor use to such structures would be limited, minor impacts resulting from continued visitation of the Adamson House, Looff's Hippodrome (on Santa Monica Pier), and the Will Rogers House might gradually occur, due to wear-and-tear and routine maintenance activities. These impacts would be considered minor because they are localized and gradual. In this event, rehabilitation or preservation treatment would be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995), and would reduce or eliminate these effects.

To appropriately preserve and protect the many historic structures of SMMNRA that are either listed on, or potentially eligible for listing on, the National Register of Historic Places. A historic resource study will be conducted in 2001 to assess eligible historic structures and landscapes and nominate those that meet National Register criteria. All preservation, rehabilitation, restoration, and reconstruction efforts, as well as daily, cyclical, and seasonal maintenance, would continue to be conducted in accordance with the National Park Service's *Management Policies* (2001) and *Cultural Resource Management Guidelines* (1996), and the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

Making historic structures accessible to the physically challenged, to comply with the Architectural Barriers Act of 1968 and the Rehabilitation Act of 1973, could result in the loss of historic fabric or the introduction of new visual and non-historic elements. For example, the doorways of buildings could require widening and ramps, or wheel chair lifts may be added to the exterior of buildings. These impacts would be considered moderate if the *Secretary of the Interior's Standards for the Treatment of Historic*

Properties and guidelines for the restoration of historic buildings is followed because they would potentially involve only a few components of sites with high data potential. To minimize these, minor perceptible but localized impacts to the historic values of these structures, historic architectural studies and plans for modification would be developed to reduce damage to the historic integrity of structures and ensure the highest levels of compatibility possible. To minimize the potential for loss of historic fabric, historic structure reports and rehabilitation or preservation treatment plans would be developed by qualified architects, historians, and architectural historians. The SHPO and concerned preservation societies would review all plans prior to implementation of any changes. Appropriate mitigation measures would be developed, including use of historically appropriate materials and designs. As a result, these impacts would be kept to a negligible level.

Actions undertaken to minimize erosion along historic roads and trails would be implemented in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995) and would preserve the integrity of these cultural resources. Such measures would include use of historic building materials or screening or concealment of erosion control structures using historic landscape features. Consultation and coordination with the cultural resource advisors, and incorporation of their recommendations into improvement plans, would minimize impacts.

- **Cultural Landscapes**

The expansion or improvement of existing visitor centers and interpretive facilities, or construction of new structures, parking areas, trailheads and trails, and picnicking and camping sites, could impact the cultural landscapes of the recreation area by disrupting or destroying historic settings and other characteristics of integrity. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. The careful design of facility improvements would include consultation with historical landscape architects, architects, or landscape historians and Native American Indian groups. The use of compatible materials in the construction of new facilities, interpretive waysides, or trails would reduce impacts to cultural landscapes to negligible levels.

Though potentially significant cultural landscapes would be protected and preserved, continued visitor use could result in increased erosion and vandalism, accelerating the degradation of contributing landscape features and elements such as roads and trails, structures, fence rows, and orchards. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. However, the SMMNRA interpretive and educational programs would increase visitor appreciation of the resources and how they are preserved and managed, as well as provide an understanding of how to experience such resources without inadvertently damaging them. The continuation of these programs would reduce visitor impacts to cultural landscapes to negligible levels. Preventative maintenance of the resources would also reduce impacts.

The designation of Mulholland Drive/Highway as a scenic corridor would encourage public interest in the corridor and its associated resources. Designation as either a heritage corridor or cultural landscape could foster increased awareness and recognition of Mulholland Drive as a historic resource. At the same time, such designations would also likely generate increased traffic, which could create major

impacts that would include widespread and highly noticeable deterioration of setting and other aspects of integrity. Through the assessments and consultations that would attend such a designation, additional mechanisms, incentives, and opportunities to protect the resource could be provided to eliminate these impacts. Such measures would include traffic volume control, parking control, and expanded transit options.

- **Ethnographic Resources**

Through consultation with concerned Native American Indian groups, ethnographic resource values have been taken into consideration early in the planning process. The limited developments proposed under the no action alternative would be designed to reduce or eliminate direct impacts to known ethnographic sites. These impacts would be considered moderate because they could potentially result in a perceptible degradation of a Native American site with moderate to high historic data potential. These sites would, to a greater or lesser extent, depending upon their location and nature, remain susceptible to such impacts as natural deterioration, inadvertent damage by human activity, and vandalism.

Erosion control, restricted access, visitor education, and other measures would be implemented to ensure that these impacts are kept to negligible levels. Supporting Native American Indian participation in the interpretation of ethnographic resources would continue to expand the interpretation of the ethnographic resources of the SMMNRA. Such actions would enhance the ability to protect and preserve ethnographic resources and continue the traditional cultural practices, as well as increase appreciation of traditional cultures.

- **Component Actions**

Actions that would proceed under the no action alternative (continuation of current management plans and policies) are listed below, along with their potential impact on cultural resources and the mitigation measures to minimize those impacts. In a majority of instances, however, the presence or absence of cultural resources has not yet been ascertained. As a result, the intensity of impacts cannot always be determined at this time.

1. ***Distribution of land with the current use intensities: low 30 percent, moderate 60 percent, high 10 percent*** – The moderate intensity use areas serve as buffer zones between low intensity areas with culturally sensitive sites and areas of high intensity use. Moderate use areas, however, are accessible to visitors, which could result in erosion, inadvertent damage, and vandalism. A 60 percent distribution of moderate intensity use areas tempers the potential for these impacts to cultural resources to occur within the moderate areas. However, it also provides accessibility to the low-intensity use areas. The 30 percent distribution of low-intensity use areas also allow the potential of direct impacts to cultural resources because of the relatively small acreage reserved for preservation and protection. The visibility afforded adjacent, low-intensity use areas, however, minimize the possibility of intentional vandalism and negligible to moderate impacts would be expected to occur because impacts would occur infrequently and would be localized along exposed fringes of sites only. The following mitigation measure is recommended to prevent any impacts from occurring:

✔ The NPS agencies shall continue to inventory cultural resources in accordance with Section 110 of the National Historic Preservation Act of 1966, as amended (16 USC 470). CSP

would continue to be guided by the *California Public Resources Code.*

2. ***The Backbone Trail would be completed and portions of the trail in sensitive areas might be rerouted to avoid those areas, or to minimize the length of crossing across the sensitive area*** – Trail construction might adversely affect nearby archeological sites, historic properties and the cultural landscape, either through ground disturbance caused by trail construction, or through increased erosion, access, or vandalism could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if trails are sited through, or adjacent to, sites with high cultural potential. Rerouting of trails away from sensitive areas would increase the protection and preservation of cultural resources within those areas. The following mitigation measure is recommended:

   ✔ A cultural resource inventory, evaluation, and impact assessment program conducted by a qualified historical landscape architect or landscape historian would precede all ground-disturbing activities. If any resources are identified, mitigation measures, including avoidance or data recovery, would be developed and implemented. Concerned Native American Indian groups would be consulted regarding potential impact to cultural landscapes of traditional significance and would assist in developing appropriate mitigation measures.

3. ***Develop coastal education center at Leo Carrillo State Park to provide environmental education and visitor orientation*** – Construction activities might directly affect historic properties in the project area through disturbance of archeological sites, erosion or other means. These impacts could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if trails are sited through, or adjacent to, sites with high cultural potential. The following mitigation measures are recommended:

   ✔ A cultural resources inventory, evaluation, and impact assessment program would precede construction. If resources are identified, mitigation measures such as avoidance of data recovery would be implemented.

   ✔ Qualified state park or NPS archeologists and Native American Indian representatives would conduct monitoring of ground disturbance in the vicinity of known or suspected archeological resources. Should unknown resources be identified, a qualified state park or NPS archeologist would conduct data recovery in consultation with the SHPO.

4. ***The campground at Leo Carrillo State Park would be rehabilitated to integrate the campground with natural riparian processes*** – The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the *California Environmental Quality Act,* and the *Secretary of Interior's Standards for Historic Properties*.

   ✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the

historic characteristics of the Leo Carrillo State Park property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures would include avoidance or archeological data recovery.

5. ***The California State Parks Headquarters would remain in its current location.*** – The headquarters are in a house that was originally constructed for the film *Mr. Blandings Builds His Dream House* (1948). This structure is potentially eligible for inclusion on the National Register of Historic Places. The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*.

6. ***The Santa Monica Mountains Conservancy offices would remain in their current location.*** – No potential impact to historic properties exists based on the proposed action; mitigation measures are required. This building is not eligible for the National Register of Historic Places. Therefore, modifications are not subject to the National Historic Preservation Act (NHPA).

7. ***Construct an accessible trail at Liberty Canyon.*** – Construction might directly affect historic or archeological resources located in the project area through disturbance of archeological sites, erosion, or other areas. These impacts could be considered moderate if sites with high archeological value are extensively affected. If resources are identified, the following mitigation measures are recommended:

   ✔ A cultural resources inventory, evaluation and assessment program, followed by mitigation through avoidance or data recovery, if necessary, would precede plan implementation.

   ✔ Concerned American Indian groups would be consulted prior to plan finalization, to assist in determining appropriate mitigation measures. Monitoring of ground disturbance would take place in the vicinity of known or suspected archeological resources.

8. ***Continue mammal tracking.*** – Mammal tracking by recreation area researchers has caused the creation of new trails, which was unforeseen and therefore not previously incorporated into management plans. These new trails provide access to areas that previously were largely inaccessible, some of which contain cultural resources. Accessibility to these areas would increase the potential for impacts due to vandalism, looting, and inadvertent damage such as trampling, although these impacts are negligible because they occur in localized areas that are centered around previously disturbed sites. The following mitigation measure is recommended:

   ✔ Trails created by mammal tracking activities that intersect constructed trails would have posted signs educating or restricting use by visitors.

9. ***Overnight use would be allowed at Leo Carrillo State Park, Pt. Mugu State Park, Circle X Ranch, Malibu Creek State Park, and Topanga State Park.*** – Circle X Ranch, Malibu Creek State Park , and Leo Carrillo State Park are in the vicinity of known historic Native American Indian settlements. Overnight use of these areas might increase the potential for impacts

to historic properties through increased rates of erosion, inadvertent damage, or vandalism. Impacts caused by these activities, however, are likely to be minor to negligible because the effects would be relatively localized and would be centered on previously disturbed areas. The following mitigation measures are recommended:

✔ Camping activities would be sited to avoid archeological sites. Ground-disturbing activities would be monitored by a qualified state park or NPS archeologist.

✔ Activities in these areas would include the restriction of fires to aboveground grills, and the location of tent pads in areas that have been previously disturbed. Archeological surveys by a qualified state park or NPS archeologist would be required of any new areas designated for overnight camping, followed by assessment of impacts to any resources. Mitigation, if necessary, would include avoidance or data recovery. Because the presence or absence of resources has not yet been determined, the intensity of impacts cannot be defined.

10. ***Watersheds and coastal resources would be protected and preserved through management practices and improvements.*** – Watershed improvements such as construction or revegetation activities might impact any historic properties present in these project areas if ground-disturbing activities take place on or near archeological sites, or these activities result in erosion of archeological deposits. The impacts would range from minor to major depending on the extent and depth of erosion, as well as the presence of significant cultural resources. The following mitigation measure is recommended:

✔ All construction or revegetation projects involving ground disturbance would be preceded by a cultural resource inventory, evaluation, and impact assessment program. If necessary, mitigation measures, including avoidance or data recovery, would be developed and implemented. As a result, impacts could be kept to negligible levels.

Cumulative Impacts

A number of projects included in the "Cumulative Impacts Methodology" section identified potential cumulative impacts on cultural resources in the area. These projects include the Las Posas Basin Aquifer Storage and Recovery Project, and the Creek Discharge Avoidance Study Alternatives. Each of the environmental analysis documents states that the implementation of mitigation measures would reduce cumulative impacts to cultural resources to a less than significant levels. Visitor use and proposed facility and trail development could potentially add to the cumulative impacts to cultural resources in the area. However, facilities would be sited at previously disturbed locations. Implementation of the mitigation measures for direct impacts to cultural resources would reduce potential impacts to cultural resources to negligible levels. Therefore, cumulative impacts to regional cultural resources from the no action alternative would be the combination of minor impacts from the GMP project combined with less-than-significant cumulative impacts from other major projects in the region. The result would be negligible cumulative cultural resource impacts.

Conclusions

The no action alternative would have impacts on cultural resources. This is largely due the designation of 60 percent of the SMMNRA lands as moderate use and 10 percent as high

use. As a result, only 30 percent would have a low intensity designation, the classification that offers the most protection to historic properties. A potentially high number of cultural resources would be at risk by project impacts and the potential for unintended damage without mitigation would be high. With mitigation, these negligible to moderate impacts would be further reduced.

The park's cultural resources would not be impaired by actions proposed under this alternative.

VISITOR EXPERIENCE

Analysis

Under the no action alternative, new facilities may attract more visitors to portions of the SMMNRA. Increased visitor use in these areas is expected to cause increases in traffic, crowding, and noise. Increased traffic, noise, and crowding may have moderate long-term adverse impacts to visitors that prefer solitude. However, the new facilities would have a moderate beneficial effect on many visitors who appreciate a more structured and social experience.

Although the number of visitors would increase under this alternative, educational and recreational opportunities would remain relatively constant. The same activities currently available at the SMMNRA (e.g., interpretive programs and recreational opportunities) would continue to be available to SMMNRA visitors. Despite the continued availability of most of the activities within the SMMNRA, this alternative would result in moderate adverse impacts to visitor experience due to the increased number of visitors to the SMMNRA and its facilities. These impacts could be mitigated by guiding visitors to high use areas, encouraging visitor use during less busy times, limiting opportunities for parking outside of designated parking areas, and providing adequate parking at, or alternative transportation to, high intensity use areas.

Cumulative Impacts

Though Review of available environmental analysis documents for the current and planned projects described in the "Cumulative Impacts Methodology" section did not identify significant cumulative impacts to visitor experience that would result from these projects. However, these projects would increase development and human presence, including residential areas adjacent to and within the SMMNRA.

Under the no action alternative, increased use levels would likely occur in the vicinity of new facilities. As overall park visitation increases with population growth and increased tourism in the L.A. area, visitors may experience more crowding and noise and observe more resource impacts at the SMMNRA facilities and trails. Changes may occur slowly but would eventually have a moderate to major long-term adverse cumulative impact on those visitors wishing to experience solitude, quiet, or a rustic experience.

Conclusions

Under the no action alternative, increased visitor use associated with new facilities may have a moderate adverse long-term impact on visitors preferring solitude, and a moderate beneficial impact on those visitors who prefer a more social experience. The quality and range of visitor experience may gradually decrease over time as cumulative impacts from increased development, population, and tourism reduce opportunities for solitude and quiet. Though impacts resulting from increased visitor use would be reduced through implementation of mitigation measures, these mitigation measures are not likely to change the intensity and severity of the impacts.

LAND USE AND SOCIOECONOMIC ENVIRONMENT

Land Use

Analysis

Current recreation area management options consist of low, moderate, and high intensity use areas. Figure 14 illustrates the designated land uses within each of the local county and city jurisdictions. Existing urbanized areas are managed as urban landscape areas, in recognition of the established development patterns. A moderate use management philosophy is applied to areas that separate low use resource preservation lands and urban communities. The no action alternative would maintain the current land use and management approach. In addition, no boundary studies would be recommended or undertaken as a result of this alternative. Although no changes to current NPS management of the study area would be implemented under the no action alternative other than the two areas that will be added pending approval of the pending legislation, inconsistencies exist between the management areas established by the NPS and some adjacent designated land uses included in county and city planning documents. These inconsistencies occur primarily where locally designated residential land uses are adjacent to NPS assigned moderate use intensity management areas in the cities of Los Angeles, Malibu, Westlake Village, and Calabasas, Los Angeles County, and a minimal area in Ventura County.

Within portions of unincorporated Los Angeles County and the cities of Malibu and Los Angeles, the NPS has established moderate use management areas adjacent to land designated for residential development. Low intensity management areas have an emphasis on "natural and cultural resource preservation and a sense of being immersed in a natural and wild landscape away from the comforts and conveniences of 'civilization.'" Residential development, even at low densities, would substantially diminish this sense of being surrounded by a completely natural landscape. This impact is therefore considered a major impact because residential uses would significantly diminish the primary focus of the low intensity management zone as areas of natural landscape, and would preclude many of the activities available in such an environment.

Moderate to major impacts would occur within residentially designated portions in the cities of Westlake Village, Calabasas, Malibu, and Los Angeles, as well as Los Angeles and Ventura Counties, that are adjacent to moderate use intensity zones. The NPS describes moderate intensity areas as areas with emphasis "predominantly on the natural environment, but there would also be a sense of being near the familiarity, comforts, and convenience of civilization." Therefore, while low density residential development could partially maintain a sense of "being surrounded by the natural landscape," which would be considered a moderate impact, higher density development (i.e., gated developments and multi-family housing) would substantially diminish the ability of the adjacent area to provide that sense, and would result in a major impact. Impacts within the cities of Westlake and Malibu, as well as Los Angeles and Ventura Counties, would primarily be expected to be moderate due to low-density or rural development, or the small overall size of the residential designation. Inconsistencies in Calabasas between residential land and adjacent moderate-use intensity management areas would be moderate to major, depending on the density of development within the residential zone.

Impacts would also be potentially moderate to major within residentially

designated portions of Los Angeles County and the city of Los Angeles that are adjacent to an NPS high use management zone, depending on the surrounding development and the nature of the facility and/or use envisioned by the NPS. For example, moderate impacts would likely occur because the surrounding area remains relatively undeveloped and would be developed with fairly low-density uses. The area would be able to accommodate a degree of visitor usage (i.e., for a parking lot and/or a small visitor's center), while still providing a "sense of being surrounded by the scenic landscape and cultural resources of a unit of the national park system," as described for high intensity management areas. Moderate impacts due to such inconsistencies would also occur in the city of Malibu. Although much of the area along PCH is developed, the roadway provides an uninterrupted view of the Pacific Ocean and its coastal beaches that represent an important resource to the region. Therefore, while inconsistencies exist, the individual could still experience the sense of being surrounded by nature. In addition, the area already experiences high visitor usage, and visitation would not increase substantially under the existing designation of the area as a high use intensity area.

The land use inconsistencies between locally designated residential areas adjacent to moderate use intensity management areas could be partially mitigated by close coordination between NPS and local jurisdictions during land development policy and plan amendment processes to improve the consistency of land use management approaches.

Impacts of a lower intensity would occur in high use intensity management areas that are adjacent to designated open space by local land use authorities because those areas would provide a greater sense of being within a national park. In the city of Los Angeles, and both Los Angeles and Ventura Counties, negligible to minor impacts would occur due to the development of facilities and the designation of high intensity use management areas, depending on whether the open space is designated for urban recreation rather than resource protection. Negligible impacts would result from high use management areas if an adjacent open space area has the primary goal of urban recreation because such uses/facilities would not substantially detract from the existing use of the area.

More substantial impacts could be expected if an open space area is dedicated to resource protection, because additional development and/or use on adjacent NPS lands could diminish the role of the open space to protect natural resources. However, these impacts would remain minor since the high use intensity designation and facility development would only occur on already disturbed or highly used sites at the perimeter of the parkland, and would therefore not greatly decrease the value of the open space. In addition, high use intensity areas are not located adjacent to any locally designated habitat preservation areas, which minimizes the potential for impacts to natural protected resources due to visitor use in high intensity areas or facilities. Activity within the SMMNRA would also be controlled, and would afford a higher level of protection than areas under local control. Negligible to minor impacts would occur under the no action alternative at WODOC, Franklin Canyon, Temescal Gateway Park, Angeles District Headquarters, Rocky Oaks, Kanan Dume Road, Charmlee Natural Area, Circle X Ranch, Rancho Sierra Vista/Satwiwa, Ventura State Beaches and Las Virgenes Canyon. These impacts would be mitigated through the design of access within high-use intensity management areas to direct visitor use away from areas primarily designated for resource protection.

No impacts associated with commercial designations would occur with implementation of the no action alterative because the few commercially designated areas within the boundary are located within the existing urban landscape. Impacts associated with industrial and agricultural designated land would be negligible because locally designated industrial and agricultural areas are nominal within the SMMNRA boundary.

Cumulative Impacts

A number of developments are proposed for sites within and adjacent to the SMMNRA on land that is currently vacant. Three of the projects included in the cumulative impacts analysis are identified as potentially contributing to cumulative land use impacts in the region. The environmental analysis documents for Ahmanson Ranch, Dayton Canyon Estates, and the Calabasas Landfill Special Use Permit each identify cumulative land use impacts related to a shift in land use within the region from open space and rural land to residential development. These shifts lead to a potential decline in recreational/open space quality of public open space lands that cannot be fully mitigated, as stated in the Ahmanson Ranch Final EIR. Although the proposed no action alternative would not incrementally add to the cumulative land use impacts occurring in the region, the impacts identified by the individual projects evaluated for cumulative impacts are considered major and would continue.

Over time, the implementation of the no action alternative, coupled with additional open space acquisition and open space dedication required of many private developments by local jurisdictions, could result in an increase of dedicated open space (despite a decrease in overall vacant space). Therefore, a decreased intensity of use would result in a portion of the land within the SMMNRA. The dedicated open space would more likely be consistent with the GMP/EIS intensity designation than the current land use designation and the dedication of open space would reduce, but not eliminate, the land use inconsistency.

Conclusions

The no action alternative would maintain the present land use and management approach. In addition, no new boundary studies would be recommended or undertaken as a result of this alternative. Various impacts ranging from negligible to major depending on location would occur as a result of inconsistencies between adjacent land uses, as described above. These impacts would occur because of inconsistencies in locally designated land uses and NPS prescribed management areas.

Population, Housing and Employment

Analysis

The Southern California Association of Governments assembles and publishes population, housing and employment projections for its member agencies. These forecasts are reviewed by local planning agencies (i.e., cities and counties) for consistency with zoning and local growth constraints such as topography, and adjusted to represent the best estimate of future growth.

The adjusted forecasts presented in the "Affected Environment" chapter served as the basis for review of each alternative, including the no action alternative. The no action alternative would not result in changes in population and housing. The number of jobs created to staff new facilities would be small within the SMMNRA and surrounding region relative to the number of jobs in the region. Negligible impacts to population, housing, or employment would be expected because the number of jobs that would result from this

alternative would not result in a detectable change to the employment opportunities in the region.

Cumulative Impacts

Cumulative impacts in the Ahmanson Ranch *Final EIR* identify a positive effect on available housing associated with residential development in a job rich, housing poor area with an increasing population. The no action alternative would not change population growth and would not provide additional housing. No changes to existing cumulative impacts are expected. Although employment within the SMMNRA may increase slightly with park and facility development, the additional employment would not be sufficient to alter regional employment patterns and would not result in cumulative impacts to area employment.

Conclusions

This alternative would not result in a change in population or housing within the SMMNRA or surrounding region. The number of jobs created to staff new facilities would be extremely small within the SMMNRA and surrounding region relative to regional employment. No mitigation measures are required.

Transportation

Analysis

- **Regional and Local Highway Network**

  Under the no action alternative the roads within and near the SMMNRA would continue to provide for access and egress to the recreational destinations and parklands within the SMMNRA as well as the private lands and residences within the SMMNRA.

  The Southern California Association of Governments develops future year projections of traffic volumes. The SCAG forecasts were used to provide an indication of the general magnitude to traffic that would be using the major routes in and near the SMMNRA in the future. For the purposes of this analysis the SCAG data was adjusted to represent the estimated average daily traffic volumes in the year 2015. The future traffic volumes are presented in Table 23.

  A level of service (LOS) evaluation was conducted according to the procedures outlined in the *Transportation Research Board's Highway Capacity Manual* (HCM)—*Special Report 209* and the *Highway Capacity Software* (HCS) for roadway sections using the year 2015 projections. The results of the year 2015 LOS analysis for the major routes in and near the SMMNRA are summarized in Table 23.

  The LOS analysis results indicate that most of the major corridors serving the SMMNRA, including three of the four major north-south corridors over the mountains, PCH between Kanan Dume Road and I-10, and Highway 101, would be operating at capacity by the year 2015. The LOS of other secondary roads within the study area would degrade slightly but still provide an acceptable LOS between now and the year 2015.

  According to SCAG the vehicle use on Highway 101 would continue to increase. By the year 2015 the traffic volume on this highway is projected to be between 200,000 and 377,000 average daily traffic (ADT). By this time the highway would operate at capacity during most daytime hours.

  It is estimated that by the year 2015 PCH would receive up to an additional 20,000 ADT. Volumes west of SR 23 would increase to almost 34,000 ADT while volumes near I-10 would increase to nearly 89,000 ADT. By the year 2015 traffic congestion along PCH would increase to the point that bumper-to-bumper traffic and long vehicle delays would be the norm throughout the day during the summer months and on weekends in the

Table 23

YEAR 2015 LEVEL OF SERVICE SUMMARY*

Route	From	To	1998 ADT	1998 LOS*	2015 ADT	2015 LOS*
Highway 101	Las Virgenes Rd.	Kanan Rd.	183,200	E	241,700	F
Mulholland Hwy.	Topanga Canyon Blvd.	Old Topanga Canyon Rd.	7,400	D	10,000**	E
Mulholland Hwy.	Topanga Canyon Blvd.	Malibu Canyon Rd.	2,800	B	4,000**	C
Mulholland Hwy.	Kanan Dume	SR 23	150	A	200**	A
PCH	I-10	Sunset Blvd.	68,700	E	88,900	F
PCH	Malibu Canyon Rd.	Kanan Dume	26,000	B	41,700	C
PCH	SR 23	Point Mugu	10,800	A/D***	33,900	C/F***
Topanga Canyon	PCH	Mulholland	14,200	E	19,000**	F
Malibu Canyon Rd.	PCH	Mulholland	22,800	F	31,000**	F
Kanan Dume Rd.	PCH	Mulholland	10,700	E	15,000**	E
SR 23	PCH	Mulholland	1,000	A	1,100	C

** LOS represents PM peak hour conditions.*

*** Traffic projection not available for SCAG, 2 percent annual growth rate used and rounded up for estimate projection shown. All other projections were obtained from SCAG.*

**** LOS A/D represents LOS A where there are two travel lanes in the direction of travel and LOS D where there is only one travel lane in each direction. The same holds true for LOS C/F.*

ADT represents Average Daily Traffic.

shoulder seasons. By the year 2015 PCH corridor would be operating at LOS E from the Kanan Dume Road east to I-10 during peak periods.

As traffic increases in the future the LOS on most of Mulholland Highway would continue to provide an adequate LOS. Traffic volume increases on Mulholland in the vicinity of Topanga Canyon Boulevard would degrade to performance of the road to LOS E by the year 2015.

Traffic volumes on Topanga Canyon Boulevard are estimated to grow at a 2 percent annual growth rate and are estimated to increase to approximately 19,000 ADT by the year 2015. With this traffic increase would come added traffic congestion. The LOS on Topanga Canyon Boulevard would degrade to LOS F by the year 2015.

Traffic volumes on the Malibu Canyon corridor are estimated to grow at 2 percent annually and carry approximately 31,000 ADT by the year 2015. This corridor would provide LOS F in the year 2015.

Traffic volumes on the Kanan Dume Road would increase to approximately 15,000 ADT by the year 2015 and continue to provide LOS E during the peak hours of the day.

State Route 23 corridor volumes would increase on slightly to 1,400 ADT by the year 2015 and operate at LOS C.

Under this alternative the NPS would continue the policy of encouraging and

supporting the removal of street lighting and power poles from the corridors within SMMNRA.

- **Public Transportation**

  Public transportation to destinations within and near the SMMNRA would continue to be provided in the future as part of this alternative. The current transit providers would continue to provide transit service along portions of PCH and along the Highway 101 corridor at levels that are similar to what is currently provided.

  Under this alternative the NPS would continue the policy of encouraging and supporting others in developing additional public transit options for visitors to the SMMNRA and commuters passing through the SMMNRA.

- **Parking**

  The various parking facilities that serve the recreation areas within the SMMNRA would remain as they are at this time. Demand for these parking areas is expected to increase in future years. The lack of adequate parking for the beaches along PCH would continue to get worse as visitation increases. Traffic problems created by visitors parking along the shoulders of PCH would also continue to get worse over time.

  Demand for parking in areas within the SMMNRA that serve the trailheads and other recreational areas would continue to grow in the future. Most of the existing parking areas would be able to accommodate visitor demand on most days for the foreseeable future. The parking area serving Cheeseboro Canyon would continue to be saturated on weekends and large visitation weekdays.

  As part of this alternative a new parking lot would be constructed to serve the proposed "Gateway to Santa Monica Mountains Visitor Center" at Leo Carrillo State Park. This new parking facility would be sized to handle passenger vehicles as well as buses.

Cumulative Impacts

Traffic volumes on the roads within and near the SMMNRA would continue to increase due to growth in the surrounding communities. Traffic congestion would increase accordingly at critical intersections and on the high volume corridors. Topanga Canyon Road, Malibu Canyon Road, Kanan Dume Road, and PCH from Malibu east would experience the greatest amounts of traffic congestion and other related problems. All other roads within the SMMNRA would experience increased volumes over time, but would continue to operate effectively and without unacceptable levels of traffic congestion.

Conclusions

It is not within the ability of the NPS to control or restrict growth in the surrounding communities. Mitigation would include the promotion and development of transit operations and ridesharing programs, which would help reduce the number of vehicles using the commuter corridors through the SMMNRA.

Public Services and Utilities

Analysis

- **Public Services**

  The no action alternative proposes new facilities and improvements to existing facilities. Under this alternative, the demand for fire protection services increase current service demands. According to the VSS and Los Angeles and Ventura Counties, who provide fire protection and emergency response services to the SMMNRA, the development of the new and modified park facilities would require additional fire protection facilities or personnel. With

implementation of the no action alternative, moderate impacts would be expected to public services since there would be no substantial change in the existing requirements. The impacts would be further reduced through increased fire awareness for park visitors, including signs and public information, and limiting storage of combustible, flammable materials onsite.

Police protection services would be expected to remain similar to current service levels with implementation of the no action alternative. Based on the type of new park facilities and improvements to existing facilities, a substantial demand on police protection services would not be expected and only negligible impacts would be expected. These impacts would be further reduced through NPS VSS consultation with the Los Angeles and Ventura County Sheriff Departments to ensure adequate police protection services.

- **Water/Wastewater**

The no action alternative proposes development of park facilities along with improvements to existing facilities that would require an increase in potable and non-potable water demands. While the precise rate of water consumption for these facilities is not known, it is estimated that only a relatively small increase in water demands compared to existing water demands would be required to support the proposed land uses and facilities. Based on discussions with the Las Virgenes Municipal Water District (LVMWD), which is the major provider to the SMMNRA, adequate water supplies and facilities currently exist to support the projected water demands of this alternative. With respect to wastewater services and facilities, the LVMWD could provide wastewater service to park facilities associated with this alternative or on-site septic systems that connected to LVMWD trunk lines could be utilized. Based on the existing available capabilities provided by LVMWD, only negligible impacts to water and wastewater services are expected with the no action alternative. If necessary, these impacts could be further reduced by providing onsite groundwater wells, water storage and planning on-site septic systems as necessary during facility planning stages.

Future development would be required to examine the potential increase in demand for water/wastewater services, in conjunction with subsequent environmental review.

- **Waste Management**

Under this alternative, the level of waste management service would be expected to increase slightly from current generation rates. According to Los Angeles County, adequate solid waste capacity is available for the projects associated with this alternative. Based on the relatively small amount of solid waste generated as part of this alternative, plus the available capacity of regional landfill facilities, only negligible impacts to waste management services and facilities would be expected as a result of this alternative. These impacts could be further reduced through identifying the location of the nearest solid waste facility with capacity to handle additional waste flow and confirmation of available solid waste capacity for each facility at the planning stage.

- **Energy**

Construction and operation of facilities associated with the no action alternative would result in a relatively small increase in electric and natural gas consumption. Adequate electric and natural gas transmission facilities and capacity is available for land uses and facilities associated with this alternative. Based on the available facilities and adequate capacity, only negligible energy impacts are expected as a result of this alternative. These impacts could be further reduced through minimizing

energy consumption on park lands, confirming availability of energy supply from local utilities, and possibly producing alternative energy supplies onsite (i.e., solar or individual generators).

Cumulative Impacts

A number of projects included in the cumulative impacts methodology section identified regional cumulative impacts on public services and utilities. Environmental analysis documents for Ahmanson Ranch, Lake Eleanor Hills, Dayton Canyon Estates, and Coldwater Canyon each identify various regional cumulative impacts to public services and utilities.

Maintaining adequate public services such as fire protection and law enforcement is an issue addressed by each of the documents. Continued development, including Ahmanson Ranch, and Lake Eleanor Hills may generate the need for additional services. These potential regional cumulative impacts to such services are considered significant by each of the above projects, and although the incremental additions to such services would be minimal with implementation of the no action alternative, it could add incrementally to the cumulative impacts in the area.

Ensuring adequate water supply for existing customers and future development continues to be an important issue for developing areas in southern California, and is identified as a significant cumulative impact in the Ahmanson Ranch and Coldwater Canyon documents. Although the impacts associated with the proposed no action alternative are negligible, the project would add incrementally to moderate cumulative effects on water supply. The negligible additions the no action alternative would make to regional wastewater streams would result in minor cumulative impacts to wastewater treatment capacity.

The significant need for additional regional solid waste capacity is identified in the environmental documents for several projects reviewed for cumulative impacts. Although the no action alternative would add negligible solid waste to regional production, the cumulative impact would remain significant.

Although the expansion of the existing museum would not be expected to result in cumulative impacts to energy resources, continued development in the region would continue to add to the consumption of available electric and natural gas energy supplies, and could become a concern as development occurs. These cumulative impacts are considered minor due to the current construction and permitting of numerous power generating facilities in California. The no action alternative would not significantly add to energy consumption in the region and the cumulative impact would remain minor.

Conclusions

The no action alternative would have moderate impacts on public services and utilities due to existing available capacity at local suppliers.

UNAVOIDABLE ADVERSE IMPACTS

Various negligible to minor adverse impacts after mitigation have been identified for soils and geology, water resources, floodplains, biological resources, paleontology, cultural resources, visitor experience, employment, and public services and utilities. These impacts are included in the "Analysis of Impacts" discussions for each resource. These impacts are not expected to have an overall effect on the respective resources. Impacts to visitor experience and land use were the only moderate to major impacts identified for the no action alternative.

Increased visitor use in areas where new facilities are developed is expected to cause increased traffic, crowding, and noise. This

may have moderate adverse impacts to visitors that prefer to experience quiet and solitude. Inconsistencies in locally designated land uses and NPS prescribed management areas would result in moderate and major adverse impacts to land use in some locations. Major adverse impacts would occur where low use management areas are adjacent to areas designated for residential development. Moderate to major impacts occur where moderate and high intensity use areas are adjacent to residential areas.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES

There would be minor irreversible or irretrievable commitments of biological resources and cultural resources. Vegetation, wildlife habitat, or archeological resources lost to development of permanent facilities, and on-going maintenance of roads and trails would result in irreversible/irretrievable commitments of resources.

Impacts on land use would involve permanent inconsistencies once areas designated for inconsistent development under local land use plans are developed. The management areas designated by the NPS, however, would not result in irreversible/irretrievable commitments of resources because local land use decisions would continue to control development of property not owned by NPS.

RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The current plans encourage short-term, primarily non-consumptive uses of biological resources (e.g., bird watching, hiking). These uses do not come at the expense of long-term productivity. In fact, constraints on short-term uses should enhance the long-term productivity of the area.

Preferred Alternative

NATURAL RESOURCES

Air Quality

Analysis

The types of impacts on air quality resulting from proposed facility and trail development in the preferred alternative would be similar to the no action alternative. The proposed facilities and trail segment developments in the preferred alternative would have direct construction-related air quality impacts near construction sites. Air pollution emissions from construction activities would be generated as fugitive dust, or particulate matter, and diesel exhaust from heavy construction equipment. Air pollution emissions would be mitigated using one or more of the control measures identified in SCAQMD Rule 403, as appropriate. Any buildings with potential asbestos materials would be surveyed; if asbestos-containing materials were present, compliance with SCAQMD Rule 1403 would be accomplished, as appropriate, including notification to the district, and coordination with scheduling, disposal, removal, and handling procedures. See "Summary of Mitigation Measures Common to All Alternatives" section.

Air quality impacts due to construction emissions would be short-term in nature and would be minor due to the implementation of mitigation measures. Mobile source emission impacts would be negligible because there would be no significant change from existing conditions due to activities within the preferred alternative.

Cumulative Impacts

The proposed developments within the SMMNRA would not occur simultaneously and would result in temporary construction - related air pollution emissions, which would add to the existing ambient air pollution in and near construction sites. However, air quality impacts from construction activities would be minor after mitigation.

Conclusion

Facilities and trail segment development without mitigation could results in localized short-term moderate adverse impacts. Sensitive individuals could suffer from adverse health effects and visibility conditions in the park could be impacted. Following mitigation, impacts from construction activities would be minor. There would be no significant changes to the existing mobile source emissions within the SMMNRA from actions proposed in the preferred alternative. However, improvements in transit opportunities (park shuttle buses) and the use of alternative fuels in park fleet vehicles would slightly improve the existing air quality conditions within the SMMNRA.

Impacts on the park's air quality would not be impaired by actions proposed under this alternative.

Soundscapes

Analysis

- **Construction Impacts**

  Noise impacts would occur during construction and deconstruction/demolition phases of projects included in the preferred alternative. Typical noises during construction activity would include the mechanical noises and peak noise levels associated with construction equipment. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, constitute the most persistent sources of noise during construction projects. The noises associated with operating a D8 Caterpillar Bulldozer (85 dBA, at 50 feet), for example, and various construction equipment, can be roughly twice as loud as an average car. Some construction equipment and activities can produce sounds in excess of 100 dBA, typically in short bursts, but spread over the duration of the project. These effects would be 16 or more times as loud as a typical vehicle.

  Sensitive receptors to noise in the preferred alternative include picnic areas and campgrounds, residential areas, schools, hospitals, churches, and libraries. Noise mitigation measures would be used to reduce impacts in noise-sensitive areas as much as feasible. See "Summary of Mitigation Measures Common to All Alternatives" section.

Cumulative Impacts

The largest noise source within the SMMNRA is from traffic using existing roadways. Alternatives considered would not alter the current fleet mix, frequency, or speed traveled on these roads. Construction projects proposed in the alternatives would not occur simultaneously. However there would be cumulative impacts related to construction noise added to existing traffic and other ambient noise levels in and near construction sites. These impacts would be temporary in nature and would be mitigated to the greatest extent feasible.

Conclusion

Construction noise might result in temporary short-term moderate to major impacts on ambient noise levels in and near construction sites. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, would constitute the most persistent sources of noise during construction projects. Noise impacts sufficient

to cause annoyance, negatively impact visitor enjoyment, and/or interfere with regular conversations would occur in short episodes in and near construction sites. The NRA would take action to prevent or minimize all noise that, through intensity, frequency, magnitude, and duration, adversely affects the natural soundscapes and other park resources or values. Specific mitigation measures would be included in all facility development-specific plans.

The park's soundscapes would not be impaired by actions proposed in this alternative.

Soils and Geology

Analysis

- **Soils**

  The types of direct and indirect impacts on soil and geologic resources resulting from proposed facilities and trail segment development in the preferred alternative would be similar to the no action alternative. These developments, along with proposed improvements to existing facilities, include the environmental education day camp at Solstice Canyon, the Cheeseboro Canyon trailhead, the accessible trail at Liberty Canyon, the coastal education center at Leo Carrillo Park, the Mission Canyon trailhead, Paramount Ranch improvements, Mugu Lagoon Visitor Education Center, the visitor education center at Malibu Bluffs, rehabilitation of the Morrison House, installation of eight new camps along the Backbone Trail that passes through areas of low and medium intensity use, and completion of the Backbone Trail. These facilities would be developed on previously disturbed sites whenever possible. Adverse impacts resulting from these development activities could include the removal and disturbance of soils and geologic deposits through construction activities, such as cut and fill, grading, and paving. Removal of soils and vegetation by surface-disturbing activities could also result in increased soil erosion that can, in turn, adversely affect off-site vegetation and increase siltation in downstream watercourses.

  Adverse impacts associated with construction activities are anticipated to be short term and minor or moderate without mitigation. These impacts are considered minor or moderate because construction sites would be small and localized, erosion would be limited to construction areas, and construction activities would be intermittent and temporary in nature. If these impacts occur in areas containing non-erodible soils, the effects would be perceptible, although their presence would not have an overall effect on soil resources in the SMMNRA. If, however, such impacts occur in areas with erodible soils, a noticeable effect on area soil resources could occur and moderate impacts would result. The level of impact is similar to that of the no action alternative; however, impacts under the preferred alternative would affect a larger area due to the increased number of facilities.

  Adverse impacts on soil resources could also result from soil erosion and increased debris flows from removal and disturbance to soils for fuel management, fire suppression, search and rescue operations, and trail maintenance. The risk of unplanned fires resulting from visitor use would be slightly increased in the areas adjacent to new facilities. These effects are expected to be minor to moderate because they would occur intermittently and temporarily due to emergency fire suppression activities.

  Erosion due to visitor use would also be limited to the immediate area of the proposed facility. Such impacts would be minor in areas with non-erodible soils or low intensities of visitor use. because, although perceptible impacts may occur to soil

resources due to slight erosion, these impacts would not have an overall effect on soil resources within the SMMNRA. Moderate impacts would be more likely to occur in areas with erodible soils or high visitor use due to the increased soil erosion and the increased potential for noticeable impacts that affect soil resources as a whole within the SMMNRA.

Impacts from fuel management, trail management, and facility development in this alternative are expected to be continual and minor to moderate. The level and duration of impact would be similar to that of the no action alternative, although impacts under the preferred alternative would affect a larger area; but the difference in area is not substantial enough to cause a major impact.

Increased soil erosion from increased visitor use would occur in high use areas. However, the greater proportion of areas designated as low intensity use under the preferred alternative would result in beneficial impacts compared to the no action alternative. Impacts of soil erosion from visitor use are expected to be perceptible but would not change area erosion. They would therefore be minor and ongoing, similar to the no action alternative.

Erosion control measures such as sediment retention basins, silt fences, or slope stabilization would be included in all facility development plans and would be implemented for surface-disturbing activities, such as construction or trail maintenance. The SMMNRA agencies would maintain and protect natural landscapes soil resources through minimal water use or use of reclaimed water.

Adverse impacts on soils from management activities, maintenance, and visitor use would be minimized or avoided through careful planning and enforcement. Visitor management and visitor education would be effective in minimizing many potential impacts. Fire clearance zones would be incorporated into the planning of developments. Educational efforts, such as posting fire hazard signs, should be effective in reducing the likelihood of visitor-caused fires. These mitigation measures would reduce potential impacts related to construction and visitor use to minor and negligible, respectively.

Some beneficial effects of the preferred alternative include decreased erosion and siltation, which would be due to restoring disturbed areas in the recreation area to natural conditions. These restorations would include eliminating some fire roads, rerouting and revegetating trails in or near sensitive resources, and removing some roads and restoring them to a natural condition or reconfiguring them to low impact trails.

The reduction or elimination of parking in some areas of the SMMNRA would reduce the impacts on the vegetation and the soil mantle. There would be less erosion and resultant siltation under this alternative compared to the no action alternative. Decreased soil erosion from curtailed visitor use in low intensity areas and revegetation of roads, trails, and parking areas would be localized in areas of low intensity uses and revegetation, but a minor, long-term, beneficial effect is expected.

- **Geologic Hazards**

Unmitigated geologic hazards could impose potentially major long-term adverse impacts to public health and property after facilities development. The principal hazards within the SMMNRA are ground shaking, landslides, debris flows, and ground failures resulting from liquefaction. These impacts would be considered major because there would be a potential for substantial human safety risk and property loss.

Potential impacts resulting from geologic hazards would be limited to areas where

facilities would be added. The potential exposure to unmitigated permanent geologic hazards is greater than the no action alternative due to the increased number of facilities in the preferred alternative.

The primary mitigation for geologic hazards relative to proposed facilities and trail segment development remains the same for all alternatives. This includes the avoidance of geologic hazard zones through careful siting of facilities and minimizing hazard impacts through careful design and construction practices. All grading and construction plans would be submitted to qualified technical staff within the administering agencies for geologic and geotechnical review prior to approval. Geotechnical and geologic hazard investigations would be conducted prior to project implementation with a focus on projects in areas of concern. Such areas include projects involving hillside terrain, proximity to active or potentially active faults and areas of possible liquefaction. New facilities would be sited to avoid geologic hazard zones. New facilities and the modification of existing facilities would be designed and constructed in compliance with all applicable state and federal building code standards. Avoidance of geologic hazard zones would reduce impacts to minor.

Cumulative Impacts

Cumulative impacts to soil and geologic resources from the preferred alternative are similar to those described for the no action alternative. These impacts would be minor, contributing incrementally to the minor adverse impacts to soils and geologic hazards from other actions described under the no action alternative. Though more facilities and trail segments would be developed under the preferred alternative compared to the no action alternative, proposed facility locations are dispersed throughout the SMMNRA, would be localized, and would not be expected to increase cumulative impacts. Increasing the proportion of areas of low intensity use would have a minor beneficial effect on the cumulative soil and geologic hazard impacts.

Conclusions

The preferred alternative would result in direct and indirect impacts on soil and geologic resources, which would be similar to the minor to moderate short-term impacts associated with the no action alternative.

Beneficial effects of the preferred alternative include plans to restore disturbed areas in the recreation area to natural conditions. There would be a modest decrease in erosion and resultant siltation under this alternative compared to the no action alternative due to a greater proportion of the area designated as low intensity use.

Geologic hazards could impose major adverse impacts to public health and property as a result of facilities and trail segment development. This alternative includes more facilities and improvements than the no action alternative and therefore increased potential exposure to geologic hazards. Mitigation measures discussed in the analysis of impacts section would reduce impacts for soils and geologic hazards to minor.

Soil resources and exposure to geologic hazards on privately held land would largely depend upon local enforcement of land use and building permits by other local agencies.

The park's soils and geologic resources would not be impaired by actions proposed under this alternative.

Water Resources

Analysis

The proposed facilities and trail development in the preferred alternative could adversely affect water quality within the SMMNRA similar to the no action alternative. Impacts could include an increase in the runoff

volumes and rates from these areas that could potentially cause streambed and bank erosion, habitat scour, and benthic smothering from the increased flows. Runoff from these areas could also contain pollutants such as hydrocarbons and heavy metals from vehicles. These pollutants could cause minor short- and long-term impacts on the health of the aquatic life in streams. These impacts would be considered minor because runoff containing pollutants or high levels of sediment would be expected to occur in small quantities, would be intermittent, and would be limited to the immediate area surrounding exposed open roads and construction areas. These impacts are anticipated to remain minor, although the area of impact would be larger than under the no action alternative due to the increased number of facilities.

Direct short-term minor impacts could occur during construction of the proposed facilities. Clearing vegetation during construction and grading activities leaves soils exposed to erosion during rainfall, and these sediments could impact the stream turbidity and suspended sediment levels, which could affect light penetration and visibility in the streams. These impacts would be considered minor because runoff-containing pollutants or high levels of sediment would be expected to occur in small quantities, would be intermittent, and would be limited to the immediate area surrounding exposed open roads and construction areas.

Accidental spills of fuel and other automotive fluids could occur during the servicing of construction equipment and could impact waterways if these activities are conducted near waterways or without berms or other means of secondary containment. Increased use of unsealed tracks and roads might also result in erosion risk. Impacts from the increased use of unsealed tracks/roads and other activities associated with increased visitor use and trail management activities would be moderate because fuel spills could potentially affect the quality of waterways and water bodies within the SMMNRA. They would occur only intermittently and would be temporary, however, and would be limited to the area surrounding construction sites. The area of impact might be slightly larger than the no action alternative due to the increased number of facilities.

Mitigation of these impacts would be applied in two phases, during construction and longer term, more permanent measures. Mitigation during construction would be achieved through development of a construction stormwater management plan by a qualified professional, which would emphasize careful planning of activities to minimize soil disturbance and recommend on-site temporary water treatments, silt fences, and sedimentation ponds. Fueling and servicing of construction equipment would not occur within 100 feet of a waterbody or drainage area unless adequate spill control/containment is provided. These measures would retain pollutants on-site and reduce potential downstream impacts of construction.

Longer-term mitigation of potential impacts for the proposed facilities and trail segment development would include treatment of the runoff from developed areas to reduce vehicle-related pollutants from reaching the waterways. A qualified engineer within the administering agencies would conduct a soils and engineering evaluation to support the location and design of all septic system installations. The permanent mitigation measures would be planned and designed as part of the detailed design of the proposed facilities. Impacts after mitigation would be minor.

The proposed campground or trail camps could result in moderate impacts to water resources by increasing pathogen levels in the waterways and posing a threat to aquatic and human health. Mitigation of these impacts would be through planning the location of

the restroom facilities and associated septic systems to minimize the delivery of pathogens to surface water. Erosion control measures such as sediment retention ponds, silt fencing, or slope stabilization techniques would be employed to reduce erosion risks. Impacts to water resources from campground facilities would be reduced to minor after mitigation.

Another impact from the trail campsites and other developments would be the extraction of potable water. The source of drinking water for these facilities and camps would be considered carefully because removing too much from the stream system might result in widespread and substantial degradation of water flow and habitat quality. Should these effects occur, they would be considered moderate adverse impacts to aquatic life in the streams. The availability of good quality drinking water might determine the feasible size of camps and would be considered carefully in the detailed design phase. Impacts could be reduced to minor after mitigation.

There would also be moderate beneficial effects under the preferred alternative. Some of the degraded tracks and paths would be restored in the low intensity areas, therefore noticeably reducing the risk of erosion-related impacts to the waterways.

Cumulative Impacts

The preferred alternative involves construction of several facilities within the Malibu Creek watershed. These facilities may alter the local habitat in smaller tributaries into which discharges occur. Discharges would result in minor impacts to watersheds from increased run-off and pollutants. The preferred alternative would contribute to cumulative impacts identified for the Malibu Creek watershed in the Ahmanson Ranch Draft EIR. However, the contribution from the preferred alternative would be minimal due to the small size of the proposed facilities relative to larger development projects affecting the watershed. Moderate adverse cumulative impacts to water quality in the region are anticipated. would remain moderate.

Increasing the proportion of areas of low intensity use under the preferred alternative would have a minor beneficial effect on water resources in Malibu Creek and other watersheds. Cumulative impacts to water resources might increase in other watersheds in the SMMNRA in the future as densities of development increase within areas designated for future residential and commercial use. These impacts would be reviewed on a watershed basis in future NEPA/CEQA documentation when facilities are funded for site identification/development, design, and construction.

Conclusions

Under the preferred alternative, minor adverse impacts are expected to water resources in the areas that are proposed to be developed with visitor and education centers and expanded campgrounds, trailheads, and accessible trails, including reduced water quality, potential flooding, and potential reduced flows from water extraction.

The overall impacts on water quality of the preferred alternative would be minor provided appropriate mitigation measures are employed. The most emphasis should be placed on the construction of new facilities (water quality and quantity impacts) and on the restoration of degraded trails in the low intensity areas (water quality improvements). The overall areas that are proposed for development with facilities are small compared to the overall watershed and therefore are expected to only provide minimal additional impacts compared to existing conditions.

The park's water resources would not be impaired by the actions proposed in this alternative.

Floodplains

Analysis

The major drainages/floodplains in the SMMNRA as described in the "Affected Environment" chapter include Calleguas and Malibu Creeks as well as the Arroyo Sequit stream. The preferred alternative proposes the following facilities and uses in the vicinity of these floodplains that either include modified/new structures or would increase the access to and extended duration of activities (especially over night) in the floodplains.

- Mugu Lagoon Visitor Center and CSUCI Research and Information Facility are in the vicinity of Calleguas Creek floodplain.
- Leo Carrillo State Park campground rehabilitation and Circle X Ranch camp are in the vicinity of the Arroyo Sequit stream floodplain.
- Paramount Ranch Film History Center and Museum, Las Virgenes Environmental Education Center, Gillette Ranch Joint Administration and Environmental Education Center, Malibu Bluffs Visitor Education Center, environmental day camp at Solstice Canyon, and the accessible trail at Liberty Canyon are near the Malibu Creek floodplain.

Additionally, this alternative includes areas designated as high intensity use that encompass the Calleguas and Malibu Creek floodplains as well at the Arroyo Sequit stream floodplain.

It is expected that the rehabilitation of the Leo Carrillo campground, which is in Arroyo Sequit Canyon, would entail naturalizing the stream and improved natural floodplain processes – natural flood cycles, habitat, depositions, scouring, etc. Capacity would be similar to what currently exists, so increased visitation would not be a factor. The stream tends to flood in the winter, which is the off-season for coastal camping, so visitation would likely be low at this time. The mitigation measures listed attempt to address safety issues but not environmental ones, which in this case are more critical.

The specific locations for the structures and use areas for facilities listed above have not been determined. The intensity or severity of potential impacts would ultimately depend on these locations. However, locating structures/extended use areas for one of the proposed facilities within the 100-year floodplain would result in long-term moderate adverse impacts because it would increase access to the floodplain and provide for the construction of facilities within the floodplain. These actions would increase the potential for loss of life or property through increased potential for flooding. Locating structures/ extended use areas for more than one facility in the 100-year floodplain would result in major long-term adverse impacts because the potential for flood damage would increase.

These impacts could be reduced through mitigation. During siting of structures and use areas for proposed facilities and trail segments in the vicinity of a floodplain, an engineering evaluation would be conducted by a qualified engineer to identify the boundaries of the 100-year floodplain. Unless infeasible, structures and use areas would be located outside the floodplain boundaries. Facilities and trails within the 100-year floodplain would be closed 24 hours prior to a predicted 50-year, 24-hour storm event. NPS would use various warning systems and would patrol use areas within the floodplain prior to and during storms to ensure that these areas are not occupied. For example, VCFCD has operated a flood warning system since February 1979. The system is called "ALERT", an acronym for Automated Local Evaluation in Real Time, which was developed by the National Weather Services. In addition, signs would be provided at the floodplain boundary on trails and access roads alerting

park users that they are about to enter an area prone to flooding during wet weather conditions.

Cumulative Impacts

The preferred alternative could contribute to cumulative impacts to floodplains. However, review of environmental documents for other ongoing or planned development projects did not reveal potential for impacts to floodplains. Consequently, the preferred alternative would not result in cumulative impacts.

Conclusions

The preferred alternative could result in potentially moderate adverse long-term impacts related to the above facilities and the designation of high intensity use that encompasses the Malibu and Calleguas Creeks and Arroyo Sequit stream floodplains. This alternative could result in potentially moderate long-term impact to floodplains related to the Leo Carrillo State Park campground.

Beneficial effects would be associated with the resource management actions on table 8 such as watershed and coastal resource management and protection of wildlife corridors. Mitigation measures, as discussed in the analysis of impacts section, would reduce the adverse impacts related to floodplains to minor.

The park's floodplain resources would not be impaired by actions proposed under this alternative.

Biological Resources and Wetlands

Analysis

- **Vegetation**

  Direct and indirect adverse impacts on vegetation in the preferred alternative, overall, would be less than in the no action alternative. Previously disturbed areas would be restored to natural conditions, although 18 facilities would be added or modified in previously disturbed sites within park boundaries in compliance with environmentally sensitive criteria. The specific biological resources affected by the development of projects within this alternative will be presented in separate NEPA/CEQA documentation prepared for each project, although some general consequences may include the impacts discussed in the following paragraphs and sections.

  Development of these proposed facilities and trail segments would have direct impacts on previously modified (ruderal) vegetation, and would have a localized negligible to minor affect on native vegetation. For example, within the park there may be small areas of temporary adverse impacts on native vegetation around the fringes of disturbed areas from these developments due to cut and fill, grading, fuel management zone, and paving requirements. The vegetation in the proposed development sites would presumably be primarily ruderal prior to implementation of the development plan. Efforts would be made to avoid any native plant material and revegetation would occur. By rehabilitating existing disturbed areas with native vegetation, including unused trails and roads, for example, impacts on the acreage of native vegetation, in balance, should be beneficial.

  The effects of newly created edges between habitats could be expected adjacent to developed facilities and trail segments. Edge effects are changes within a "zone of influence" between habitats that may vary in width, depending upon what is measured. The intensities of edge effects frequently depend upon the sizes and shapes of the disturbed areas and, therefore, the lengths of the edges between habitats. Such effects could include changes in biotic factors such as temperature, relative humidity, penetration of light, and exposure to wind, each of which could affect the presence or distribution of

species within the area. Biotic changes due to edge effects could include elevated plant mortality, depressed migratory bird use and breeding near habitat margins, or increases in insect species diversity (Soule 1986, Meffe and Carroll 1997). For projects within the SMMNRA, the size and extent of such edge effects, if any, would be analyzed in additional documentation prepared for each project. The impact of these edge effects would likely be negligible to minor in intensity because the siting of projects would be localized and limited to areas that have been previously disturbed, which are less likely to support sensitive native vegetation. Typical edge effects would be beneficial for the preferred alternative compared to the no action alternative due partially to the alternative's emphasis on habitat restoration where feasible, and the use of previously disturbed sites for facility developments.

Adverse impacts on native vegetation could also result from local land use requirements of fuel management zones around developed structures. For example, Los Angeles County regulations require a 200-foot fire suppression zone around structures built within chaparral vegetation. Natural vegetation is removed and replaced with fire-retardant landscape species from an approved plant palette. The intensity of this impact depends upon the size of the development area and its shape. Spherically shaped developments would have a smaller edge than a long linear development of the same size and, accordingly, a smaller amount of vegetation would be removed to comply with fire suppression regulations. These fire suppression zones would be permanent.

The risk of unplanned fires resulting from visitor use would be increased in the areas adjacent to new facilities and trail segments, which would increase the intensity of impacts on vegetation from the effects of fire. The intensity and frequency of this impact is uncertain due to the unpredictability of such fires. However, impacts resulting from wildfires pose a major risk for biota in natural areas throughout most of the SMMNRA, depending on the extent of sensitive species that would need to be replaced. For vegetation near roads, the risk of fires is greatest, often resulting from burning objects being thrown from vehicles. In this alternative, the length of the scenic corridor designations in the SMMNRA would be modified to include Malibu Canyon Road. This would likely moderately increase the risks of wildfires in the vegetation near Malibu Canyon Road.

Beneficial effects of the preferred alternative include plans to restore disturbed areas in the park to natural conditions. With time, the amount of native vegetation in the park would likely increase, and areas now supporting disturbed vegetation would decrease from development of park facilities. Examples of areas that could be restored to natural conditions would include unused trails and roads. In some new facilities, native species could be used for landscaping.

About 80 percent of the SMMNRA would be designated as a low intensity area where visitor access to sensitive resources would be neither facilitated nor encouraged. The low intensity areas would be generally surrounded by moderate intensity areas, which would act as buffers between the low intensity areas and the higher use areas. The designation of low intensity use areas would also contribute to the lessening of impact intensities on sensitive biological resources because it would further limit public access to core areas that support populations of sensitive species.

The primary mitigation for proposed facilities and trail segment development is the avoidance of undisturbed native vegetation through careful siting of facilities. Where possible, new development would be sited in previously disturbed areas. Disturbed sites typically support stands of exotic vegetation,

thereby avoiding or minimizing impacts on undisturbed, native vegetation. All grading and construction plans would be submitted by a qualified professional to the administering agencies for review prior to approval. Areas temporarily disturbed during construction would be recontoured and revegetated with appropriate native plant species; appropriate fire-suppression zones would be maintained around developed structures. Erosion control measures, such as temporary sedimentation basins and silt fences during construction, rerouting trails to avoid problem areas, or repairing washouts on trails with temporary (rice) straw bales (debris traps), would be installed/completed for surface disturbing activities, such as construction or trail maintenance.

Clearance surveys would be conducted by qualified biologists prior to project implementation in the appropriate season for listed species, as well as other species of federal or state concern (listed in Table 13). These surveys would be used in the site planning of facilities to avoid sensitive species. The administering agencies would consult with the USFWS and CDFG if any listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state-listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, ESA Section 7, or CWA Section 404/401 processes. Monitoring by a qualified biologist is required for surface disturbing activities in or near sensitive vegetative resources (e.g., wetlands, listed species habitat). Best management practices would be implemented during construction. For example, construction would be avoided during the rainy season. In emergency construction situations during the rainy season, temporary sedimentation retention basins could be required on some projects. In addition, servicing of construction vehicles could be prohibited within 100 feet of riparian corridors, or disturbances of native vegetation or the root zones of oak trees could be avoided by staking construction staging areas. Such measures, and others as appropriate, would ensure that impacts on biological resources due to construction would be avoided, otherwise mitigated, or that any effects would be negligible.

Adverse impacts on vegetation from management activities, maintenance, and visitor use would be minimized or avoided altogether through careful planning of facilities and programs., considering the distribution of sensitive biological resources during the planning processes. Visitor management and visitor education programs, which would also be developed for each project, would be effective in minimizing many potential impacts. For example, requirements for pre-construction meetings with biologists and construction crews could be integrated into contracts to emphasize the effects of management or visitor activities within specific biological communities, resource locations, or activities; meeting topics could include what would be inappropriate for, or detrimental to, biological resources. Such standard educational programs could be adopted for all projects within the SMMNRA, and established within the contracts of all projects. In a more general way, standard educational themes emphasizing potential impacts on biological resources could be incorporated into all educational and community outreach programs conducted by the SMMNRA staff.

Fire clearance zones would be incorporated into the planning of new facility developments. Educational efforts, such as posting fire hazard signs and distributing educational brochures, should be effective in reducing the likelihood of visitor-caused fires and their resultant impacts. If vegetation is

lost or disturbed from visitor activities, facilities would be relocated or the area would be rehabilitated or revegetated with species from an appropriate native plant palette and seed/plants would be obtained from local sources. or facilities would be relocated.

The preferred alternative includes the provision of proposed boundary changes and future studies to create additional resource protection along the northern central and western borders of the park. It also includes pursuit of agreements with other land management agencies to ensure that the area north of the SMMNRA into Conejo Valley and the Simi Hills area north to Santa Susanna Pass be protected as a critical wildlife corridor and open space, and to determine recommended boundary adjustments north of Cheeseboro/Palo Comado Canyons. Such boundary changes and agreements would potentially provide additional protection to vegetation in the linkages within Ventura County. The no action alternative does not include this provision. If these proposed boundary changes are implemented, the preferred alternative would potentially increase the protection of vegetation to the north of the current SMMNRA substantially, and provide for additional linkages to other open spaces, and at a minimum for archipelago (steppingstone) linkages to other habitat areas in the north.

In general, mitigation measures would be effective in avoiding or minimizing the loss of natural vegetation, and permanent loss in the low intensity areas would be relatively small as result of the preferred alternative. Because most of the lands within the SMMNRA would be designated for low intensity use, impacts on biological resources throughout the park would be minor and reduced from levels expected in the no action alternative.

- **Wildlife**

Facilities and trail segment development for the preferred alternative would have direct impacts on some wildlife species, especially those that are adapted to the use of disturbed habitats. These impacts would be similar to the impacts described in the no action alternative biological resources section. Some impact-tolerant species, such as starlings, would be displaced to other similar areas of the SMMNRA, or to areas outside the park's boundaries. Removal of such disturbed habitat would have a minor effect on these wildlife species because they are highly adaptable and disturbed habitats are common. A few species of small mammals, birds, reptiles, and amphibians would be permanently or temporarily displaced by construction activities. Adjacent populations could be adversely affected as displaced wildlife attempt to inhabit off-site areas where other individuals are already established.

There is little potential for decreases in the habitat available for endangered, threatened, rare, or sensitive species of wildlife in this alternative. Negligible or minor impacts would occur if only a small portion of habitat is affected, or if construction/ disturbance occurs during non-breeding seasons and individuals or populations are not noticeably affected. Major impacts could result, however, if a large proportion or critical area of the population is affected or if disturbance occurs during breeding seasons such that the viability of the population is threatened.

In addition, major impacts could occur if sensitive or endangered species are impacted, even to a small extent. These negligible to major impacts on disturbed wildlife habitats from facility development under the preferred alternative would likely be higher than those of the no action alternative due to the increase in the number of facilities. Effects of

the preferred alternative on endangered, threatened, rare, or sensitive wildlife species due to the greater percentage of area that is designated as low intensity use would be beneficial compared to the no action alternative.

Visitor uses, such as hiking, horseback riding, and mountain biking, could have direct and indirect adverse effects on all classes of wildlife. Direct impacts include disturbance of soils supporting vegetation, trampling or removal of vegetation, and disturbance of wildlife activities and habitat, especially for species that are sensitive to the presence of humans. Indirect effects from visitor use would include disruption of wildlife activities for some species. Some species, such as mountain lion and deer, are particularly sensitive to human activity in their proximity and near water sources may avoid water sources as a result of visitor activity.

Impacts on wildlife from visitor activities under this alternative, in general, would be beneficial, primarily due to the park's designation of low intensity use zones. However, the intensity of impacts would vary from negligible to major on different wildlife species, depending upon the particular species, location, and land use involved. Mountain lions and golden eagles, for example, would likely be more affected by human activities along trails, and could experience major impacts than would other species, such as some small species of rodents, birds, amphibians, and reptiles. These small species would probably be less affected by human trail activity and could therefore be subject to only negligible to minor impacts.

Construction planning and monitoring by a qualified biologist in areas supporting sensitive wildlife would reduce or prevent some impacts. Avoidance of undisturbed native vegetation and critical population areas and wetlands would occur through careful siting of facilities. New development would be sited in previously disturbed area; thereby avoiding or minimizing impacts on undisturbed native vegetation. All grading and construction plans would be submitted to a qualified professional for review prior to approval. Pre-project surveys would be conducted by qualified biologists prior to project implementation in the appropriate season for listed species, as well as other species of federal or state concern (see Table 12). The administering agencies would consult with the USFWS and CDFG during the detailed planning phase of a project, if any listed species or its habitat may be affected during a proposed action. Compliance with California law would be required for proposed actions that may affect state listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, ESA Section 7, or CWA Section 404/401 processes.

Monitoring by a qualified biologist would likely be required for surface disturbing activities in or in close proximity to, sensitive wildlife resources (e.g., listed species habitat). Best management practices would be implemented during construction.

- **Habitat Connectivity**

Implementation of the preferred alternative would enhance the connectivity of undisturbed habitats in the SMMNRA by creating very large expanses of open space, with a nearly continuous connection of low impact use along the entire east/west axis of the park. About 80 percent of the SMMNRA would fall into this category. Such large expanses of natural habitat would promote healthy populations of numerous wildlife species, including sedentary species of some lizards, mice, rabbits, and insects, to name a few. It also would provide large areas and territories for use by larger, more mobile species, such as coyotes, grey foxes, passerine birds, and deer. Areas of moderate intensity

area designation would occur primarily around urban centers., and in several larger inclusions west of Sycamore Canyon, and along Deer Creek Canyon and west of Sycamore Canyon in Ventura County. In Los Angeles County, these inclusions of moderate intensity area would center around Charmlee Natural Area, the Rocky Oaks/Paramount Ranch area, and at the eastern head of the Backbone Trail. These areas would be managed to promote uses that are compatible with habitat preservation, such as rerouting trails away from critical wildlife areas. The scenic corridors would be limited to Malibu Canyon Road, Mulholland Drive, and PCH from Malibu Point west to Pt. Mugu. Potentially, this configuration of designated use areas could reduce impacts on specific wildlife species from human activities by perhaps one or more level of intensity (major to moderate, moderate to minor, minor to negligible) for many species when compared with the no action alternative.

Connectivity of habitat and movement corridors would be enhanced by the increase in designated low intensity areas in comparison with the no action alternative. Furthermore, the potential addition of lands on the western SMMNRA boundary, and the promotion of agreements with other land management agencies on the northern boundaries of the park would increase the amount of conservation and connectivity of habitats in those areas. One major habitat connection of regional importance connects the Santa Monica Mountains north through Simi Hills to the Santa Susanna and San Gabriel Mountains. Pending legislation will include upper Las Virgenes Canyon and Liberty Canyon in the SMMNRA boundary, which are vital portions of this wildlife corridor. These additions would provide long-term connectivity for predators and their prey, such as mountain lions, coyotes, and deer, which, in turn, would provide more natural, healthy ecosystem functions throughout the park. Populations of mountain lions, for example, would likely have better reproductive vigor because of the increase in gene flow over decades of time. This would bolster the health of predator-prey relationships throughout the park.

As with the no action alternative, the primary mitigation to offset impacts from new development would be the avoidance of sensitive habitats and habitat linkage areas through careful project siting. A qualified biologist in the administering agencies would evaluate all proposed actions for their effects on habitats and on habitat connectivity to avoid or mitigate further habitat fragmentation. New developments would be excluded from existing wildlife corridors, or minimized to the greatest extent practicable, to ensure the continued exchange of genes and individuals between wildlife populations within and adjacent to the SMMNRA. Where already constrained movement corridors are identified, new developments would be precluded or minimized to allow for the areas continued function as a habitat connection. Degraded habitats within conserved linkage areas would be restored. Whenever possible, documented wildlife movement areas would be improved with the appropriate NEPA/CEQA documentation prepared for that project. The most effective means of maintaining habitat connectivity is through the maintenance of sufficiently wide (greater then 400 feet) habitat linkages between major blocks of habitat.

Lagoons, coastal wetlands, and marine interface areas would receive focused protection and management through the use of general agreements with land use regulatory agencies, research agencies, and university research.

- **Wetlands**

Several of the proposed facilities included in the preferred alternative are located near wetland resources:

- ***The Mugu Lagoon Visitor Education Center*** – would be sited between PCH and the lagoon within an already disturbed upland site. This facility includes a perimeter boardwalk for visitor viewing of the lagoon and associated wildlife.
- ***The Circle X Ranch*** – includes a substantial riparian area located adjacent to existing developed areas and trails.
- ***Leo Carrillo State Park campground*** – is in a major drainage and riparian area. The rehabilitation would integrate the campground with the natural riparian processes.
- ***Paramount Ranch*** – has a substantial riparian area that bisects it. Existing access through this riparian area would be maintained.
- ***Solstice Canyon -*** The environmental education day camp at Solstice Canyon would interpret the adjacent wetlands.
- ***Liberty Canyon -*** The accessible trail at Liberty Canyon would also interpret adjacent wetlands.

Wetlands and riparian habitats are considered sensitive resources to be conserved and enhanced wherever practicable. Impacts to wetland resources associated with this alternative are considered to be potentially minor to moderate and short term. Facilities would be located near, but not within, wetlands, whenever feasible. Minor impacts would be expected with uses adjacent to wetlands that have a slightly perceptible impact on wetland value or function, but are localized or affect only edge habitats on non-sensitive species. Major impacts to wetland resources are not expected because impacts associated with facility construction would be localized and sited outside wetland boundaries. New facilities would be sited away from wetlands wherever practicable. A detailed wetland delineation in accordance with the Coastal Act's definition of wetlands would be used prior to site engineering so that this information could be used during the site design process.

New facility infrastructure (water, sewer, roads, or trails) would avoid wetland resources where upland alignments are practical. These activities would be isolated, localized, and infrequent. Upland buffers between wetlands and facilities would be provided wherever practicable. Where existing facilities require long-term maintenance or enhancement (e.g., Circle X Ranch), siting of infrastructure improvements would minimize impacts to wetland resources wherever practicable. Existing disturbed areas within the drainage reach associated with the facility would be utilized where avoidance of wetland impacts is not practicable. Indirect impacts to water quality and downstream sedimentation would be avoided through site design to minimize erosion and divert runoff water to detention basins where appropriate. Opportunities to restore and enhance disturbed wetland resource areas adjacent to facilities would be identified during the site design process. Closure of selected roads and trails would provide opportunities for wetland restoration resulting in a minor long-term benefit. Unavoidable impacts to wetland resources would be fully mitigated through the 404/401 and 1603 wetlands permitting process, which emphasizes avoidance and minimization of impacts prior to considering compensatory mitigation.

Cumulative Impacts

Cumulative impacts of the preferred alternative would be similar to those minor cumulative impacts described under the no action alternative. However, the preferred alternative would have a more substantial

beneficial effect on the SMMNRA's biological resources due to the increased percentage of low intensity use areas. Overall, the regional cumulative impacts to biological resources and wetlands would remain minor.

Conclusions

Direct and indirect adverse impacts on native vegetation in the preferred alternative would be similar to the education and preservation alternatives. A variety of edge effects, such as noise and lighting disturbances to wildlife and losses of vegetation from foot traffic, could be expected within a zone of existing and future facilities having relatively high human usage. The width of such edge effects would be analyzed in the documentation prepared for each project. Moderate adverse impacts on native vegetation would result from requirements of fuel management zones around developed structures. Impacts from fuel management and facility and trail segment development in the preferred alternative would be moderately higher than in the no action alternative. In contrast to the no action alternative, the preferred alternative would result in a net gain of wetland and other native vegetation acreage as recommended boundary changes were implemented.

In this alternative, the length of the scenic corridor designations in the SMMNRA would be modified to include Malibu Canyon Road. and eliminate the use of Mulholland Drive east of the junction of these two roads. This would likely moderately increase the risks of wildfires in the vegetation near Malibu Canyon Road. and lessen the risks near Mulholland Drive.

Beneficial effects of the preferred alternative include rerouting and revegetating trails in or near sensitive resources.

About 80 percent of the SMMNRA area would be designated as low intensity areas where visitor access to sensitive resources would be neither facilitated nor encouraged. The low intensity areas would be generally surrounded by moderate intensity areas, which would act as buffers between the low intensity areas and the higher use areas. Typical edge effects would be less for the preferred alternative compared to the no action alternative.

The preferred alternative includes the provision of proposed boundary changes and future boundary studies to create additional resource protection along the west-central borders of the park and initiation of agreements with land management agencies to protect land north of the park. Such boundary changes would potentially provide additional protection to vegetation in the linkages within Ventura County. The no action alternative does not include this provision.

Facilities and trail segment development would have negligible to minor direct, localized impacts on some wildlife species, especially those that are adapted to use of disturbed habitats. Impacts from facility development under this alternative would be higher than those of the no action alternative. Visitor uses, such as hiking, horseback riding, and mountain biking would have direct and indirect, adverse effects on all classes of wildlife and wetlands. Impacts from visitor uses under the preferred alternative would be less than in those of the no action alternative.

Implementation of the preferred alternative would enhance the connectivity of undisturbed habitats in the SMMNRA by creating very large expanses of open space. There is little potential for decreases in the habitat available for endangered, threatened, rare or sensitive species of wildlife in this alternative. In comparison with the no action alternative, connectivity of habitat and movement corridors would be enhanced by the increase in designated low intensity areas. Further, the potential addition of lands on the

western and northern boundaries of the park would increase the amount of conservation and connectivity of habitats in those areas.

In general, mitigation measures would be effective in avoiding or minimizing loss of natural vegetation, and permanent loss in the low intensity areas would be minor as result of the preferred alternative. Because most of the lands within the SMMNRA would be designated for low intensity use, impacts on biological resources and wetlands throughout the park would be reduced from levels expected in the no action alternative.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national recreation area's establishing legislation, (2) key to the natural or cultural integrity or opportunities for enjoyment of the national recreation area, or (3) identified as a goal in this general management plan or other relevant NPS planning documents. Consequently, the NRA's biological resources and wetlands would not be impaired by actions proposed under this alternative.

Paleontological Resources

Analysis

Under the preferred alternative, potential impacts to paleontologic resources would result from facilities developments, fire suppression, and fuel management. Impacts are similar to the no-action alternative but would affect a larger area due to increased facilities development. Proposed facilities would be established in previously disturbed areas. Nevertheless, moderate adverse short-term impacts to paleontologic resources could result from the limited disturbance of sediments that possess high to moderate paleontologic sensitivity by the excavation and grading of adjacent previously undisturbed sediments. Excavation, grading, and paving of previously disturbed sediments would not result in adverse impacts to paleontologic resources.

Adverse long-term impacts could occur as a consequence of trail development where paleontologically sensitive sediments, previously protected from erosion by soil and vegetation, are exposed to erosion. Without mitigation, this impact is anticipated to be moderate due to the potential for disturbing a limited area of deposits with moderate to high paleontological potential. Additionally, unauthorized collection of fossils would result in loss of the scientific and educational potential of those specimens. This loss would constitute an adverse, minor long-term impact because facilities and high use intensity areas would be likely to encompass only limited deposits with moderate to high paleontological potential because of their location in previously disturbed areas.

A qualified paleontologist would determine whether sediments of high to moderate paleontologic sensitivity occur in the project area and would be impacted during the administering agencies' grading and construction plan review. If sediments of high to moderate paleontologic sensitivity were to be disturbed, monitoring by a qualified paleontologist would occur during excavation. If fossils were discovered, then excavation would be halted in the immediate vicinity of the find until the discoveries were removed in a scientifically controlled fashion by a qualified paleontologist. Recovery of the scientific data potential of the fossils would reduce impacts to a minor level. Additional mitigation measures would include public education implemented by the administering agencies regarding the scientific and educational importance of fossils and enhanced awareness of enforcement of California State and NPS non-collection policies. Facility development would be located away from known paleontological resources.

Cumulative Impacts

The preferred alternative involves development of more facilities than the no action alternative, and therefore would have increased potential for impacts to paleontological resources. However, the contribution to cumulative impacts is expected to be similar to the no action alternative because the minor impacts would be very localized and could be successfully mitigated. Cumulative impacts therefore would remain minor as identified in the listed project documents in the appendix.

Conclusions

Under the preferred alternative, impacts to paleontologic resources would result from grading related to facility development, fuel management, and trail development. Moderate adverse short-term impacts to paleontologic resources could result from the disturbance of sediments during construction activities. Unauthorized collection of fossils could result in loss of the scientific and educational potential of those specimens, and would constitute a minor adverse, long-term impact. The mitigation measures discussed in the analysis of impacts section would reduce impacts to minor.

The park's paleontological resources would not be impaired by actions proposed under this alternative.

CULTURAL RESOURCES

Analysis

When conflicts between natural and cultural resource values occur in the management of the SMMNRA, an assessment will be conducted to weigh the values and determine an appropriate direction.

Impacts to cultural resources resulting from such direction, however, would be mitigated to the fullest extent possible and reduced to negligible levels. The guidance articulated above in no manner relieves the recreation area from its responsibilities under Section 106 of the National Historic Preservation Act or under CEQA. The anticipated higher levels of visitation would make the recreation area's cultural resources more susceptible to degradation. However, implementation of the preferred alternative would significantly enhance the interpretive/educational components of the recreation areas' cultural resource management program, which would increase public sensitivity to the importance of the resources and potentially limit such degradation by instilling a greater understanding and appreciation of the resources. The development of stewardship programs could limit the destructive effects of vandalism through increased public involvement and awareness.

The SMMNRA's outreach policy, which includes conducting programs for school-children, would be expanded under the preferred alternative by incorporating more information and values about cultural resources into the curriculum. This would help build an enlightened constituency that would benefit the recreation area and resource preservation goals for the future.

SMMNRA's interest in acquiring land on the west-central borders and forming agreements with other agencies to protect the area north into Simi Hills would benefit the recreation area's cultural resources by extending the protection of federal ownership, as well as protecting the viewsheds from cultural resources from inappropriate development adjacent to the recreation area boundaries.

Staff of the SMMNRA would continue to interact with neighboring landowners and jurisdictions to ensure, to the extent feasible, that adjacent land management practices do not impair the recreation area's cultural resources, viewsheds, or distant vistas.

- **Archeological Resources**

Archeological resources would be protected from the effects of development and visitor use, where possible. However, sites would remain susceptible to natural deterioration, inadvertent damage by human activity, and vandalism in backcountry areas. Some sites would eventually be lost. Further deterioration or destruction of archeological sites in the recreation area by natural forces or human activity would result in the loss of resource values associated with the prehistory and history of the region. Such impacts are expected to be negligible because this alternative would not increase public accessibility to archeological sites in the SMMNRA. These impacts could be further reduced using appropriate treatment measures such as archeological site stabilization or revegetation.

Record searches and, where appropriate, archeological surveys conducted by qualified state park or NPS archeologists would precede all ground disturbing activities on recreation area lands. Archeological and, if appropriate, Native American Indian monitoring would be conducted by a qualified individual and would occur where ground disturbance is expected in the vicinity of known or suspected cultural resources. If cultural materials were unearthed during construction activities, all work in the immediate vicinity of the discovery would be halted until the resources could be identified, their significance assessed, and any necessary mitigation undertaken. Potential treatment could include avoidance, preservation, or data recovery. Consultation with the NPS Support Office Cultural Resource Management Team on appropriate management and mitigation actions would immediately occur on federal lands. If construction impacts on federal lands upon archeological sites cannot be avoided, the California State Historic Preservation Office and concerned Native American Indian groups would be consulted in the development of mitigation strategies.

If human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered on federal lands during facilities or trail improvements, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed.

Prior to the implementation of construction, the area of potential effect (APE) for cultural resources would be defined, a record review conducted, and a pedestrian survey completed by a qualified state park or NPS archeologist. Mitigation measures, including avoidance or data recovery, would be proposed if resources are identified, and the SHPO would be afforded the opportunity to consult on measures for cultural resources protection and mitigation of adverse impacts. Monitoring by a qualified state park or NPS archeologist and, if appropriate, a Native American Indian representative would accompany any ground disturbing construction. In the case of any unanticipated discoveries, all ground-disturbing activities in the vicinity would be stopped until the significance of the find is determined.

Management plans would incorporate measures to reduce or eliminate indirect and direct impacts to cultural resources to negligible levels. Such measures might include restrictions on access, signs, visitor education, or data recovery.

The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*.

- **Historic Structures**

No direct impacts to the three historic structures within the recreation area's boundaries that are listed in the National Register of Historic Places would result from the implementation of the preferred alternative. Although visitor use to such structures would be limited, minor impacts resulting from continued visitation of the Adamson House, Looff's Hippodrome (on Santa Monica Pier), and the Will Rogers House might gradually occur due to wear-and-tear and routine maintenance activities. These impacts would be considered minor because they are localized and gradual. In this event, rehabilitation or preservation treatment would be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

The docking of scenic coastal tour boats at Santa Monica Pier would have negligible, if any impacts upon Looff's Hippodrome, which is also listed on the National Register. The pier already experiences a high level of visitation and this coastal tour service is not anticipated to appreciably increase the existing level of visitation. Any corresponding visual or audible intrusions associated with the extremely small increase in visitation expected would not alter or diminish the integrity of Looff's Hippodrome.

To appropriately preserve and protect the many historic structures of SMMNRA that are either listed on, or potentially eligible for listing on the National Register of Historic Places, all preservation and rehabilitation or preservation treatment efforts, as well as daily, cyclical, and seasonal maintenance, would continue to be conducted in accordance with the National Park Service's Management Policies (2001) and Cultural Resource Management Guideline (1996), and the Secretary of the Interior's Standards for the Treatment of Historic Properties (1995). All potentially historic resources would be inventoried and evaluated, and a "determination of eligibility" would be prepared in accordance with section 106 of the NHPA.

Making historic structures accessible to the physically challenged, to comply with the Architectural Barriers Act of 1968 and the Rehabilitation Act of 1973, could result in the loss of historic fabric or the introduction of new visual and non-historic elements. For example, the doorways of buildings could require widening and ramps or adding wheel chair lifts to the exterior of buildings. These impacts would be considered moderate because they would potentially involve only a few components of sites with high data potential. To minimize the perceptible but localized moderate impacts to the historic values of these structures, historic architectural studies and plans for modification would be developed to reduce damage to the historic integrity of structures and ensure the highest levels of compatibility possible. All plans would be reviewed by the SHPO and concerned preservation societies prior to implementation of any changes. In addition, all modifications to historic structures would comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties (1995) for rehabilitation or preservation treatment. As a result, these impacts would be kept to a negligible level.

Actions undertaken to minimize erosion along historic roads and trails would be implemented in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995) would preserve the integrity of these cultural resources. Such measures would include use of historic building materials or concealment of erosion control structures using historic landscape features. Consultation and coordination with the historic preservation staff and

incorporation of their recommendations into improvement plans would minimize impacts.

- **Cultural Landscapes**

The expansion and/or improvement of existing visitor centers and interpretive facilities, or construction of new structures, parking areas, trailheads, trails, and picnicking and camping sites, could impact the cultural landscapes of the SMMNRA by disrupting or destroying historic settings and other characteristics of integrity. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. The careful design of facility improvements, including consultation with cultural resource advisors and Native American Indian groups, and the use of compatible materials in the construction of new facilities, interpretive waysides, or trails, would reduce impacts to cultural landscapes to negligible levels. All projects affecting cultural resources that are eligible, or potentially eligible for the register of historic places would be performed following the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

Though potentially significant cultural landscapes would be protected and preserved, continued visitor use could result in increased erosion and vandalism, accelerating the degradation of contributing landscape features and elements such as roads and trails, structures, fence rows, and orchards. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. However, the SMMNRA interpretive and educational programs would increase visitor appreciation of the resources and how they are preserved and managed, as well as provide an understanding of how to experience such resources without inadvertently damaging them. The continuation of these programs would eliminate or reduce visitor impacts to cultural landscapes to negligible levels.

The designation of Mulholland Drive, Malibu Canyon Road, and the PCH from Malibu to Pt. Mugu as scenic corridors would encourage public interest in the corridors and associated resources. At the same time, such designations would also likely generate increased traffic, which could create major impacts that would include widespread and highly noticeable deterioration of setting, feeling, and other aspects of integrity. Through the assessments and consultations that would attend such a designation, additional mechanisms, incentives, and opportunities to protect the resource could be provided to reduce or eliminate these impacts. Such measures would include traffic volume control, parking control, and expanded transit options.

- **Ethnographic Resources**

Through consultation with concerned Native American Indian groups, ethnographic resource values are taken into consideration early in the planning process. The developments proposed under the preferred alternative could be designed to minimize direct impacts to known ethnographic sites. These impacts would be considered moderate because they could potentially result in a perceptible degradation of a Native American site with moderate to high historic data potential. These sites, however, would to a greater or lesser extent, depending upon their location and nature, remain susceptible to such impacts as natural deterioration, inadvertent damage by human activity, and vandalism. Erosion control, restricted access, visitor education, and other measures would be implemented to ensure that these impacts were reduced to negligible levels.

Supporting the Native American Indian participation in the interpretation of ethnographic resources would continue to expand the interpretation of the ethnographic resources of the SMMNRA. Such actions would enhance the ability to protect and preserve ethnographic resources and continue traditional cultural practices, as well as increase appreciation of traditional cultures.

- **Component Actions**

  Component actions under the preferred alternative include the following:

  1. ***Distribution of land with the intended use intensities: low 80 percent, moderate 15 percent, and high 5 percent.*** – The higher percentage of land designated as low intensity use, and the lower percentage of land designated for high intensity use, would increase the protection afforded to cultural resources by decreasing impacts associated with visitor activities compared to the no action alternative. No mitigation efforts for historic properties are necessitated by this component action. Devices used to limit visitor access would stress the protection of the natural and cultural resources of the SMMNRA. Inventory of federal lands under Section 110 of the NHPA would continue, however, while compliance with Section 106 of the NHPA, consisting of inventory, evaluation, and impact assessment, would be followed for all planned undertakings in these areas.

  2. ***Boundary adjustment studies would be conducted for the area around Las Virgenes Canyon. This area would be included in low intensity use.*** – Some of this area, is a cultural landscape. Including this area within the SMMNRA would extend the protection provided to cultural resources under federal ownership. This area would also serve as buffers against adjacent development. No mitigation efforts for cultural resources would be necessitated by this component action. Inventory of cultural resources in acquired lands would take place in compliance with Section 110 of the National Historic Preservation Act.

  3. ***Boundary adjustment studies would also be conducted for the area east of Hidden Valley, the area north and west of Yerba Buena Road, the southern part of Ladyface, Marvin Braude Mulholland Gateway Park, and Stone Canyon. These areas would be included in moderate intensity use.*** – Some of these areas are traditional cultural properties affiliated with the area. The addition of these areas would extend to these cultural resources and cultural landscapes the protection offered by federal ownership. Based on the stated proposed action, no mitigation efforts for historic properties are necessary. Inventory and evaluation of cultural resources on newly acquired acreage would take place in compliance with Section 110 of the National Historic Preservation Act.

  4. ***The Mugu Lagoon Visitor Education Center would be located at the western end of the recreation area off of the PCH.*** – The proposed site would be located in a previously disturbed area. A historic Native American Indian settlement of considerable cultural significance, however, is located in the vicinity and unidentified components of this site might be present in the proposed site area. If intact but unidentified subsurface deposits are present, construction might impact them during the course of ground-disturbing activities. The impact would be considered major because it would affect an entire site with high archeological data potential. As a result,

further development in the area would be of concern to Native American Indians. The following mitigation measures are recommended:

✔ A cultural resources inventory, including subsurface exploration, would be completed prior to the finalization of plans associated with this facility, to assess the potential to adversely impact archeological deposits in this area. If such deposits are identified, mitigation through avoidance or data recovery would be undertaken. Because the presence or absence of resources has not been determined, the intensity of this impact cannot be determined at this time.

✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing activities. If unknown resources are identified at this time, construction would be halted until the significance of the find is determined.

✔ To assist with visitor education, the Mugu Lagoon Visitor Education Center would include information on traditional lifeways and the significance of the settlement of Muwu to the cultural history of the area.

5. ***Circle X Ranch would include a primitive overnight education camp with expanded facilities for group camping.*** – The facilities would offer improved access to backcountry recreation trails. Circle X Ranch is near a historic Native American Indian settlement. Expansion might require land clearing and/or construction that might directly impact cultural resources through disturbance of archeological sites, erosion or other means. In addition, overnight use of these areas increases the potential for impacts to historic properties, primarily through increased access, which could result in a higher potential for inadvertent damage and vandalism. Such impacts, however, are expected to be negligible because they would be localized and would be focused outside of the cultural site boundary. The following mitigation measures recommended:

✔ Prior to the implementation of construction, the APE for cultural resources would be defined, a record review conducted, and a pedestrian survey completed by a qualified state park or NPS archeologist. Mitigation measures, including avoidance or data recovery, would be proposed if resources are identified, and the SHPO would be afforded the opportunity to consult on measures for cultural resources protection and mitigation of adverse impacts.

✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground disturbing construction. In the case of any unanticipated discoveries, all ground-disturbing activities in the vicinity would be stopped until the significance of the find is determined.

✔ Management plans would incorporate measures to reduce or eliminate indirect and direct impacts to cultural resources to negligible levels. Such measures might include restrictions on access, signs, visitor education, or data recovery. A "determination of eligibility" would be proposed in accordance with section 106 of NHPA. If cultural resources were found to be eligible for the national register, all facility projects would be performed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

6. ***The campground at Leo Carrillo State Park would be rehabilitated to integrate the campground with natural riparian processes.*** – The rehabilitation of natural riparian processes would likely enhance the value of the area as a cultural landscape. However, historic properties might be impacted if rehabilitation involves subsurface disturbance. Such impacts, however, are expected to be negligible to minor, because of the low probability of such impacts affecting a site with high data potential. No mitigation would be required for activities that do not involve ground disturbance. The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*.

   ✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of the Leo Carrillo State Park property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures would include avoidance or archeological data recovery.

7. ***Develop coastal education center at Leo Carrillo State Park to provide environmental education and visitor orientation*** – Construction activities might directly affect historic properties in the project area through disturbance of archeological sites, erosion or other means. These impacts could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if trails are sited through, or adjacent to, sites with high cultural potential. The following mitigation measures are recommended:

   ✔ A cultural resources inventory, evaluation, and impact assessment program would precede construction. If resources are identified, mitigation measures such as avoidance of data recovery would be implemented.

   ✔ Qualified state park or NPS archeologists and Native American Indian representatives would conduct monitoring of ground disturbance in the vicinity of known or suspected archeological resources. Should unknown resources be identified, a qualified state park or NPS archeologist would conduct data recovery in consultation with the SHPO.

8. ***Paramount Ranch would include facilities for a film history education center and museum. Parking and circulation would be improved.*** – Paramount Ranch is a historic property and has been determined a significant cultural landscape eligible for listing on the National Register of Historic Places. Any construction or reconstruction might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character of the property. The following mitigation measures are required:

   ✔ Complete the cultural landscape report.

   ✔ Compliance with Section 106 of the NHPA and CEQA would be

required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified professional, followed by mitigation if necessary. Mitigation measures could include avoidance, data recovery through HABS/HAER documentation, reconstruction using historically appropriate materials, or similar measures. Those measures would be called out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

9. ***A scenic coastal boat tour would be run by concession with docking points located at Santa Monica Pier and Malibu Pier.*** – The Santa Monica Pier is the site of Looff's Hippodrome, which is listed on the National Register of Historic Places. As noted above, docking for a boat tour at this location would result in an extremely small increase in the number of visitors to the site and is therefore not expected to impact Looff's Hippodrome. No mitigation is required for this action.

10. ***The National Park Service and California State Parks would have a jointly operated administration and education center located at Gillette Ranch.*** – Gillette Ranch is a historic property located near a historic Native American Indian settlement. Any construction to accommodate this component action might cause the alteration, removal, or destruction of materials contributing to its historic significance. Depending upon the nature and extent of new construction and the data potential of affected sites, resulting impacts to this property could be moderate to major in intensity. It is likely, however, that joint management activity could also promote the more effective management of the cultural resources of the recreation area. The following mitigation measures are recommended:

    ✔ A cultural resources inventory, including subsurface exploration, would be completed by a qualified state park or NPS archeologist prior to the finalization of plans associated with this facility to assess the potential to adversely impact archeological deposits in this area. If necessary, mitigation of impacts to archeological resources through avoidance or data recovery would be undertaken. Construction activities affecting structural or landscape features would be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). As a result, these impacts would be reduced to negligible or minor levels.

    ✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing activities. In the event that undisturbed resources are encountered, construction would be halted until the significance of the find is determined. Concerned historic preservation groups would be consulted and their input incorporated into the management plan for this facility. Cultural landscapes would be assessed and evaluated by an historical landscape architect or landscape historian.

11. ***A visitor center would be located at Malibu Bluffs.*** – Malibu Bluffs is in an urban area. However, it is in proximity to a historic Native American Indian settlement. The possibility of intact subsurface cultural deposits exists, which poses potential impacts from construction-related ground disturbance. Because of the minimal potential for affecting previously

undisturbed archeological deposits with high data potential, these impacts would be considered minor. The following mitigation measures are recommended:

✔ Prior to the implementation of construction, a qualified state park or NPS archeologist would define the Area of Potential Effect (APE) for cultural resources, review records, and conduct a pedestrian survey of any exposed ground. Mitigation measures, including avoidance or data recovery, would be proposed if appropriate, and the SHPO would be afforded the opportunity to comment on measures for cultural resources protection and mitigation of adverse impacts.

✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing construction. In the case of any unanticipated discoveries, all ground-disturbing activities in the vicinity would be stopped until the significance of the find was determined. As a result, it is anticipated that any impacts could be kept to negligible levels.

12. ***415 PCH (Marion Davies Home) near the Santa Monica Pier would serve as an eastern gateway to the SMMNRA and would provide exhibits interpreting the evolution of southern California coastal culture.*** – The Marion Davies home is a historic property. A historic structures report, including recordation through HABS/HAER documentation, would be completed before any treatment. A treatment plan, in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, would be developed before implementation of any treatment other than stabilization. Adaptive uses would respect the property's historic character and integrity and avoid significant impacts to these resource values. Additional measures would include data recovery and interpretation of historic values.

    ✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures could include avoidance, data recovery through HABS/HAER documentation, reconstruction using historic materials, or similar measures. Construction would be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995), ensuring that these impacts are kept to negligible to minor levels.

13. ***A visitor information site would be located within Los Angeles International Airport.*** – The proposed site is already developed and no impact to historic properties is anticipated. No mitigation efforts for historic properties are necessary.

14. ***A visitor information site would be located in downtown Los Angeles on Olvera Street.*** – The proposed site is already developed and no impact to historic properties is anticipated. No mitigation efforts for historic properties are necessary.

15. ***An expanded educational day camp program would be established at the William O. Douglas Outdoor Education Center in Franklin Canyon.*** – If this expansion involves no subsurface disturbance to enlarge or improve facilities, no impacts to cultural resources are anticipated. However, Franklin Canyon is a cultural landscape and a historic Native American Indian settlement has been reported in the vicinity. Should expansion require

land clearing and/or ground disturbance, those activities could moderately impact elements of integrity contributing to the significance of the cultural landscape and/or directly affect historic properties through disturbance of archeological sites, erosion, and other means. The following mitigation measures are recommended:

✔ A cultural resources inventory and evaluation, including subsurface exploration, would be completed by a qualified state park or NPS archeologist prior to the finalization of plans associated with this facility, to assess the potential to adversely impact archeological deposits in this area. If such resources are identified, mitigation through avoidance or data recovery would be undertaken.

✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing activities. In the event that unidentified resources are discovered, construction would be halted until the significance of the find is evaluated. Cultural landscapes would be assessed and evaluated by a historical landscape architect or landscape historian.

✔ Concerned historic preservation groups would be consulted and their input incorporated into the management plan for this facility.

16. ***Mulholland Drive, Pacific Coast Highway from Malibu Bluffs to Pt. Mugu, and Malibu Canyon Road from Mulholland Highway to Malibu Bluffs would be designated as scenic corridors.*** – Road and parking area improvements might be necessary, and the construction activities associated with these actions could directly affect cultural resources. Such impacts, however, are expected to be negligible. Designation as scenic corridors would also likely generate increased traffic, which could create major impacts such as deterioration of setting, feelings, and other aspects of integrity. The following mitigation measure is recommended:

✔ All road improvements would be preceded by a cultural resources investigation and evaluation conducted by a qualified state park or NPS archeologist or historical landscape architect, inclusive of inventory, evaluation, and impact assessment. If resources are identified, mitigation measures would include avoidance or data recovery. Opportunities to protect the resource from other impacts could include traffic volume control, parking control, and expanded transit options. As a result, these impacts could be reduced to negligible levels.

17. ***Rehabilitate the Morrison Ranch House to reflect the ranching period. – The Morrison Ranch House is a historic structure and may be eligible for listing on the National Register of Historic Places. Any construction or rehabilitation or preservation treatment might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character or the property. The following mitigation measure is recommended:***

✔ Compliance with Section 106 of the NEPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified landscape architect or historic landscape architect, historical architect, or archeologist followed by mitigation if necessary. Mitigation measures could include

avoidance, data recovery through Historic American Buildings Survey/ Historic American Engineering Record (HABS/HAER) documentation, reconstruction using historically appropriate materials and prepared by a historical landscape architect in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). As a result, impacts would be expected to be negligible to minor.

18. ***The White Oak Farm would offer exhibits interpreting early ranching in southern California.*** – The White Oak Farm is a historic property. Construction activities necessary for parking improvements might directly impact contributing elements of the cultural landscape, and/or potential buried cultural deposits, while increased visitation might result in indirect effects from increased erosion, inadvertent damage, or vandalism. These impacts, however, are expected to be negligible because they would remain localized and would affect only individual components of the site. The following mitigation measures are recommended:

    ✔ Recommend that CDPR evaluate for National Register eligibility.

    ✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions that might affect cultural resources.

    ✔ A qualified state park or NPS archeologist would conduct a program of inventory, evaluation, and impact assessment prior to any ground disturbing activities. If resources are identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be implemented.

19. ***The barn at Rancho Sierra Vista would be used for an environmental education center to provide educational programs concerning contemporary and traditional Native American Indian culture and to interpret ranching history***. – This area comprises a historic Chumash village and a cultural landscape. Without appropriate consultation, educational programs concerning Native American Indian lifeways might be seen as an infringement on traditional cultural values. Ground-disturbing activities or other construction necessary for the creation of the day camp might impact contributing elements of the cultural landscape, and/or buried cultural deposits, while increased visitation might result in effects from increased erosion, inadvertent damage, or vandalism. These impacts, however, are expected to be negligible due to the control over visitor activities at the site. The following mitigation measures are recommended:

    ✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions (e.g., new facilities, facility enhancements, campgrounds, etc.) that might affect cultural resources. The administering agencies would consult with concerned Native American Indian groups to assist in developing measures to ensure that this program is developed in a manner consistent with respect for Native American Indian beliefs, traditions, and other cultural values. A qualified state park or NPS archeologist would conduct a program of inventory, evaluation, and impact

assessment prior to any ground disturbing activities. If resources are identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be conducted. New design should be compatible with existing facilities.

20. ***The Backbone Trail would be completed and expanded and some trails in sensitive areas might be rerouted to avoid those areas, or to minimize the length of crossing across the sensitive area.*** – Trail construction might adversely affect nearby archeological sites, historic properties and the cultural landscape, either through ground disturbance caused by trail construction, or through increased erosion, access, or vandalism; impacts could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if trails are sited through, or adjacent to, sites with high cultural potential. Rerouting of trails away from sensitive areas would increase the protection and preservation of cultural resources within those areas. The following mitigation measure is recommended:

    ✔ A cultural resource inventory, evaluation, and impact assessment program conducted by a qualified NPS or state park or NPS archeologist, historical landscape architect, or landscape historian would precede all ground-disturbing activities. If any resources are identified, mitigation measures, including avoidance or data recovery, would be developed and implemented. Concerned Native American Indian groups would be consulted regarding potential impact to cultural landscapes of traditional significance and would assist in developing appropriate mitigation measures.

21. ***Nonhistoric trails are to be rerouted in the vicinity of sensitive areas to avoid those areas.*** – Rerouting of trails away from sensitive areas could increase the level of protection afforded to historic properties in those areas. However, other sensitive cultural resources might be revealed during trail construction and might be adversely affected by construction activities. These impacts could range from negligible to major, depending on the data potential of affected sites and visitor use intensity. The following mitigation measures are recommended:

    ✔ A qualified state park or NPS archeologist would conduct a cultural resources inventory, evaluation, and assessment program before all trail construction. If any resources are identified, mitigation measures such as avoidance or data recovery, would be implemented. Native American Indian groups would be consulted regarding appropriate mitigation of potential impacts to cultural landscapes and places of traditional or sacred significance. To the extent possible, the trail would be constructed to avoid or minimize impacts to the traditional values of such places. As a result, such impacts are expected to be negligible.

22. ***Parking would be gravel or on permeable surfaces wherever feasible.*** – To the extent that paved parking surfaces could seal and protect buried cultural resources, gravel or permeable-surface parking areas would afford less protection in the same area. Lack of protection under this action, however, would be negligible. The following mitigation measure is recommended:

✔ A cultural resources inventory, evaluation, and assessment program conducted by a qualified NPS or state park or NPS archeologist would precede all grading and construction. If resources are identified, such mitigation measures as avoidance or data recovery would be conducted.

23. ***Watersheds and coastal resources would be protected and preserved through management practices and improvements.*** – Watershed improvements such as construction or revegetation activities might impact any historic properties present in these project areas if ground-disturbing activities take place on or near archeological sites, or these activities result in erosion of archeological deposits. The impacts would range from minor to major depending on the extent and depth of erosion, as well as the presence of significant cultural resources. The following mitigation measure is recommended:

✔ All construction or revegetation projects involving ground disturbance would be preceded by a cultural resource inventory, evaluation, and impact assessment program. If necessary, mitigation measures, including avoidance or data recovery, would be developed and implemented. As a result, impacts could be kept to negligible levels.

24. ***Establishment of an archeological district*** – Designation would have beneficial effects on archeological resources. Listing of the district on the National Register of Historic Places would provide increased regulatory protection to archeological resources from proposed development projects in the area. In addition, resource data collected for the district via testing would provide educational benefits to visitors that could serve to heighten the awareness and appreciation of visitors for archeological resources, thereby contributing to their protection over the long term.

Designation as an archeological district would also provide increased status and visibility to the district's resources. This could be a beneficial impact in that district resources would be less likely to be overlooked in situations of threatening development. Increased visibility may also lead to adverse impacts by attracting pot-hunters or collectors to the area, resulting in greater potential for disturbance, loss, or destruction of archeological resources. However, with implementation of typical park law enforcement techniques, adverse effects due to collectors are anticipated to be minor. In addition, increased visibility might result in wear and tear because staff might want to interpret the site.

Cumulative Impacts

As described under the no action alternative, a number of other past, present, and foreseeable future projects have potential for adverse impacts to cultural resources in the area. Environmental documents for these projects indicate that with implementation of mitigation measures, cumulative impacts on cultural resources from these projects would be less than significant. Under the preferred alternative, adverse impacts from visitor use and facility and trail segment development could add incrementally to impacts from other actions in the area. However, with implementation of mitigation measures, adverse impacts to cultural resources would be reduced to minor for this alternative. Consequently, impacts from the other actions in combination with impacts of the preferred alternative would result in minor cumulative impacts.

Conclusions

The preferred alternative offers a high level of protection to cultural resources, reserving 80 percent of lands for low intensity uses, 15 percent for moderate, and 5 percent for high. This is comparable to the education alternative and substantially higher protection than the recreation alternative. Component actions of the preferred alternative would result in greater potential for adverse impacts to cultural resources than in the no action and preservation alternatives, but reduced by comparison to the education and recreation alternatives. As a consequence, there would be a decrease in the potential number of cultural resources that would be affected by project impacts and require mitigation relative to the no action alternative. The potential for unintended damage without mitigation would also decrease. Impacts to cultural resources from the preferred alternative would be minor with the implementation of the mitigation measures described in the analysis of impacts section.

The park's cultural resources would not be impaired by actions proposed under this alternative.

VISITOR EXPERIENCE

Analysis

Under this alternative, the current range of visitor experiences offered at the SMMNRA would be maintained, but the percentage of land managed for low intensity would increase substantially. Increased traffic noise and crowding associated with new facilities would be concentrated around the park perimeter. Overall, major beneficial effects on visitors who seek solitude are anticipated because substantially larger areas would be dedicated to low intensity use, changing the character of much of the park. Others who seek a more social and developed experience would also find additional opportunities under the preferred alternative. The development of visitor facilities could result in moderate to major beneficial effects by allowing more visitors to see the resources of the park through exhibits and educational programs that currently do not exist, noticeably enhancing structured aspects of visitor experience. Restrictions on uses of areas currently managed for moderate intensity use may have moderate adverse impacts on visitors that enjoy multiuse trails and camping, as such areas decrease. The availability of similar activities in other use areas reduces this impact to moderate. Impacts could be reduced to minor by improving existing trails and creating new trails and camping areas in remaining moderate intensity use areas.

Under the preferred alternative, educational programs designed to encourage sustainable use of park resources by visitors would be increased. Implementation of such programs would likely have moderate beneficial effects, encouraging visitors to responsibly enjoy resources in the SMMNRA while decreasing visual and auditory intrusions (e.g., vandalism, littering, high-decibel music) that degrade visitor experiences.

Visitation to the SMMNRA by non-local tourists might increase due to advertising that would be implemented at the Los Angeles International Airport and one other location around Los Angeles. These tourists might contribute to traffic congestion and noise within the recreation area through the added use of private automobiles. Tourist use of SMMNRA would likely be focused on highly advertised areas that typically receive higher visitor use in general. Because this increase in visitation would be focused in areas that already experience high use, the impact would be only slightly perceptible, and would be considered a minor negative impact. These impacts would be reduced by encouraging visitor use during less busy times.

Beach areas and parking would remain crowded under this alternative. The crowding would be reduced by limiting opportunities for parking outside of designated parking areas and providing adequate parking at, or alternative transportation to, high intensity use areas. However, scenic and educational experiences in coastal areas of the SMMNRA would increase following implementation of boat tours between the Santa Monica Pier and the Malibu Pier, the Malibu Pier visitor contact station, the Malibu Bluffs visitor education center, the coastal education center at Leo Carrillo State Park, and the Mugu Lagoon Visitor Center. The addition of visitor orientation areas to the park could improve the experience by creating a focus for visitors. Each of the orientation areas would feature different exhibits and themes depending on their location and would add dimensions not experienced now. One example is the use of 415 PCH to interpret the history of the southern California coastal culture and the terminus of Route 66. Expanding the facilities at Paramount Ranch to include a film history education center and museum would give another dimension to visitation to that site, allowing visitors a "behind the scenes" experience. The boat tours and orientation areas offer new opportunities that may present a moderate to major beneficial effect on visitor experience because they would noticeably change the character of existing park facilities and would increase activities available at the SMMNRA.

A tour shuttle that would travel a scenic loop and stop at major points of interest in the park would possibly provide a moderate beneficial effect; visitors could see the park and relax, as opposed to driving their own vehicles. Recreational users would be able to park in designated lots and not face the difficulty of finding parking in the limited spaces throughout the recreation area. This would have an overall positive long-term effect.

In addition, the reintroduction of sensitive species, including steelhead trout, would provide increased opportunities for visitors to learn about the native flora and fauna that once inhabited much of the greater Los Angeles area. Increased interpretive resources throughout the SMMNRA, related to cultural properties (e.g., pictographs, ranches), would increase slightly, adding additional educational value to park visits. These educational opportunities related to natural and cultural resources are expected to have moderate beneficial effects on visitor experience because they would substantially increase the range of activities available at the recreation area and would be clearly detectable.

Cumulative Impacts

Though review of available environmental analysis documents for the current and planned projects described in the cumulative impacts methodology section did not identify significant cumulative impacts to visitor experience that would result from these projects, the projects would increase development, human presence, and residential areas adjacent to and within the SMMNRA. As with all the alternatives, overall park visitation would increase with population growth and increased tourism in the L.A. area. Park visitors would experience more crowding and noise and observe more resource impacts. For those who value a more primitive experience, these changes would have a moderate adverse impact. This impact, in combination with the beneficial and adverse impacts of the preferred alternative, would result in minor beneficial cumulative impacts on visitor experience.

Conclusions

The preferred alternative would maintain the existing range of recreational visitor experiences. Increasing the percentage of low intensity use areas would help ensure that

visitors have the opportunity to experience quiet and solitude, as would boundary adjustments to include more undeveloped space. A boat tour along the coast would give visitors the opportunity to view the recreation area from another perspective and learn about marine life. New opportunities would be available through visitor education facilities that would have a moderate beneficial effect on the quality of the visitor's experience. The beneficial visitor experience effects would be enhanced further by the mitigation measures discussed in the analysis of impacts section.

LAND USE AND SOCIOECONOMIC ENVIRONMENT

Land Use

Analysis

The preferred alternative would provide for low intensity management of 80 percent of the SMMNRA and development of educational programs for public visitors and school systems. Trails located in sensitive areas would be rerouted and the land restored. The Backbone Trail would be completed and expanded and most other trails would be retained in their current state. Moderate intensity area buffer zones would comprise an estimated 15 percent of the recreation area land and 5 percent would be allocated to high intensity area recreation area facilities. Compared to the no action alternative, areas managed for low intensity uses would be much more extensive, and would increase from approximately 30 to 80 percent of the SMMNRA area, as illustrated in Figure 6 – Preferred Alternative. In addition, land under high intensity management would decrease from 10 to 5 percent, although the number of developed areas would increase. Moderate intensity areas would correspondingly decrease from 60 percent of the area to only 15 percent of the SMMNRA. These shifts in proposed management areas would affect the land use impacts associated with the preferred alternative. Inconsistencies in land use management are focused in the cities of Westlake Village, Calabasas, and Los Angeles, as well as both Los Angeles and Ventura Counties.

Because of the expansion of land under low intensity management, the preferred alternative would result in increased inconsistencies between locally designated residential areas (shown in Figure 14 – Land Use) and adjacent low intensity management areas. This impact is considered to be major where the boundaries of these areas meet, since residential development (even at low density) precludes many of the characteristics of low intensity management areas. For example, residential development alters the natural landscape and prevents or decreases a "sense of being immersed in a natural and wild landscape away from the comforts and conveniences of 'civilization.'" Increases in this inconsistency would occur in portions of unincorporated Los Angeles County and the cities of Westlake Village, Calabasas, and Los Angeles.

Depending on residential development densities, inconsistencies between moderate intensity management areas and adjacent locally designated residential land use could be either moderate or major. Low density residential development could maintain a rural atmosphere that allows the emphasis to "be predominantly on the natural environment, but there would also be a sense of being near the familiarity, comforts, and convenience of "civilization." Higher density housing diminishes that sense of nature, and precludes most of the activities associated with moderate intensity management areas, as defined by the NPS. However, since residential development of any density by

nature decreases the sense of being surrounded by nature, the impacts associated with such development are considered moderate to major. Moderate to major adverse impacts associated with such inconsistencies between residentially designated areas and adjacent moderate intensity management areas would decrease in the city and county of Los Angeles due to the shift of more land into low intensity management areas under the preferred alternative. The minimal areas of designated residential land in the Ventura County portion of the study area would shift to being adjacent to moderate rather than low use intensity management areas. This would result in additional moderate to major adverse impacts under the preferred alternative.

The land use inconsistencies between locally designated residential areas and adjacent low and moderate use intensity management areas could be partially mitigated by close coordination between NPS and local jurisdictions during land development policy and plan amendment processes to increase the consistency of land use management approaches.

High intensity management areas decrease in area under the preferred alternative, compared to the no action alternative, although the total number of proposed facilities increases. High intensity management areas under the preferred alternative would be surrounded by both designated open space and residential land, as described under the no action alternative. As discussed in the no action alternative impact analysis, high intensity management areas are inconsistent with residential development and would result in moderate to major impacts, depending on the type of facility or use envisioned by the NPS and the surrounding residential development density.

Negligible to minor impacts would occur in high use management areas that are adjacent to locally designated open space depending on the focus of the open space area for urban recreation or resource protection. Negligible impacts would result from high use management areas if an adjacent open space area has the primary goal of urban recreation because such uses/facilities would not substantially detract from the existing use of the area. More substantial impacts could be expected if an open space area is dedicated to resource protection, because additional development and/or use nearby could diminish the role of the open space in protecting natural resources. However, these impacts would remain minor since the high use intensity designation and facility development would occur on already disturbed or highly used sites at the perimeter of the parkland, and would therefore not greatly decrease the value of the open space. In addition, high use intensity areas are not located adjacent to any locally designated habitat preservation areas, which minimizes the potential for impact to protected natural resources due to visitor use in high intensity areas or facilities. Activity within the SMMNRA would also be controlled, and would likely afford a higher level of protection than areas under local control. Access should be designed to direct visitor use away from areas primarily designated for resource protection in areas where high use intensity management areas and facilities are adjacent to areas designated by local jurisdictions as open space (high intensity areas adjacent to WODOC, Temescal Gateway Park, Angeles District Headquarters, Rancho Sierra Vista/Satwiwa, Las Virgenes Canyon, and Ventura State Beaches).

A number of boundary studies are proposed under the preferred alternative along the edges of the SMMNRA. The preferred alternative suggests a boundary study for the southern portion of Agoura Hills east of Las Virgenes Reservoir and including Ladyface Mountain. Boundary expansion in

this area could result in major impacts due to similar inconsistencies between proposed low intensity management areas (Ladyface Mountain) and designated residential uses. Another boundary study is proposed for the west end of the SMMNRA to consider ways to buffer some of the impacts of the CSUCI expansion and associated development. The facility would be a research and information facility associated with the existing CSUCI campus. These impacts are expected to be minor because existing structures would be used rather than new construction. Until the NPS acquires additional land, all of the impacts due to land use inconsistencies involving designated residential and open space land uses would likely continue.

No impacts associated with commercial designations would occur with implementation of the preferred alternative because the few commercially designated areas within the SMMNRA boundary are within the existing urban landscape, which is not actively managed by the NPS. Impacts associated with industrial and agricultural designated land would be negligible because locally designated industrial and agricultural areas are nominal within the SMMNRA boundary.

Cumulative Impacts

Cumulative impacts are similar to those described under the no action alternative and are considered major. Although the preferred alternative proposes a number of additional park facilities, they would be located in disturbed areas and would not contribute appreciably to the overall development of the region.

Conclusions

This alternative would emphasize the preservation of existing natural environments. Various moderate and major impacts with the preferred alternative would occur due to inconsistencies between NPS prescribed low intensity management areas and local land use plans. These inconsistencies would be considered a major land use impact, and are greater in extent than those expected under the no action alternative. Additionally, inconsistencies between moderate and high intensity management areas would result in moderate to major land use impacts throughout the study area. Minor impacts would occur in scattered areas throughout the SMMNRA due to the potential location of facilities within land currently designated as open space.

In general, this alternative would have greater land use impacts associated with residential areas encompassed by low intensity management areas, but these impacts would be somewhat balanced by the corresponding decrease in impacts associated with moderate intensity management areas located in residential areas. Decreases in high intensity management areas would lead to a potential reduction in impacts associated with residential and open space lands, although these impacts would still be considered moderate to major, or negligible to minor, respectively.

The mitigation measures discussed in the analysis of impacts section would limit the expected impacts associated with the preferred alternative.

Population, Housing and Employment

Analysis

Population, housing and employment projections for Ventura and Los Angeles Counties were used to review the preferred alternative. The projections were based on the Southern California Association of Governments' *Regional Comprehensive Plan* (RCP) and include regional growth forecasts disaggregated to counties, subregions, cities,

and small geographic areas. The model used to produce small area forecasts allocates growth to different areas based on their relative attractiveness. These forecasts were reviewed by local planning agencies (i.e., cities and counties) for consistency with zoning and local growth constraints (e.g., topography), and adjusted to represent the best estimate of future growth.

The general plans of the participating local planning agencies identified the steep terrain of the Santa Monica Mountains as potentially undevelopable and often designated such land "open space" or, in some cases, the lowest residential densities. Growth and development opportunities lie the flat lands where vehicular access and public services are amply provided or easily extended. Accordingly, local planning agencies use general plan policy and zoning regulations to discourage future residential, commercial, industrial and institutional development on terrain with physical constraints and natural resource value. This local growth management approach is reflected in the adjusted, published forecasts. In addition, additional facility development would contribute minimal employment opportunity within the SMMNRA and surrounding regions relative to the number of jobs in the region. Negligible impacts to population, housing, or employment would be expected because the number of jobs that would result from this alternative would not result in a detectable change to the employment opportunities in the region. For these reasons, selection of the preferred alternative is not likely to substantially alter local and regional population, housing and employment growth forecasts.

Cumulative Impacts

Similar to the no action alternative, no cumulative impacts on population, housing, or employment would be anticipated with implementation of the preferred alternative.

Conclusions

The preferred alternative would not result in a change in population or housing within the SMMNRA or surrounding region. In addition, additional facility development would contribute minimal employment opportunity on a regional basis. No mitigation measures are required.

Transportation

Analysis

- **Regional and Local Highway Network**

  In the preferred alternative Mulholland Highway, west of Malibu Canyon Road, Malibu Canyon Road, and PCH west of Malibu would be designated as scenic corridors. Applying the scenic corridor designation to these corridors would not cause any significant substantial increases in traffic volumes on any of the major corridors within the study area.

  All of the roads within and near the SMMNRA would continue to provide for visitor access. Commuter traffic patterns would not change as a result of actions taken in this alternative. Traffic volumes and the level of service provided by the roads in the SMMNRA would be similar to the no action alternative, where most of the major routes within and near the SMMNRA would be operating at capacity by the year 2015. The secondary and minor roads within the SMMNRA would continue to operate at acceptable levels of service.

  The actions taken as part of this alternative would not produce any regionally significant traffic impacts. The significant traffic impacts occurring as a result of this alternative would be localized around the proposed education facilities. The traffic related impacts resulting from major facility

additions or modifications included as part of the preferred alternative are described in Table 24.

Under the preferred alternative the NPS would continue their policy of encouraging and supporting the removal of street lighting and power poles from the corridors within SMMNRA.

- **Public Transit**

A tour shuttle would be in operation connecting major points of interest in the SMMNRA. Visitors would be able to park at designated lots and ride the shuttle to destinations. The shuttle transportation system would have a beneficial impact on traffic in the park.

This alternative also includes actions at several locations that would help to promote transit use by creating new facilities that would be designed to accommodate buses and improving some of the existing facilities so that they could accept visitors arriving by bus. These locations include: the Mugu Lagoon Visitor Center, Circle X Ranch; Paramount Ranch, Gillette Ranch, the Northern Gateway Visitor Center, and the Malibu Bluffs Visitor Education Center, White Oak Farm, PCH 415 (Davies Home), the coastal education center at Leo Carrillo State Park, the accessible trail at Liberty Canyon, the environmental education day camp at Solstice Canyon, Santa Monica/Pacific Coast Highway Visitor Information Site, and the Franklin Canyon Education Day Camp. These improvements would make transit service accessible to many of the recreational destinations within the SMMNRA .The designation of the several routes as scenic corridors would also promote tour bus activity.

Under this alternative the NPS would continue the policy of encouraging and supporting others in the development of additional public transit options for visitors to the SMMNRA and commuters passing through the SMMNRA.

- **Parking**

New gravel (for low impact) and paved (for high impact) roadside pullout parking areas would be created along the routes that would be designated as scenic corridors. These new parking facilities would allow visitors to stop and enjoy the views and other recreational activities.

New paved parking for high impact areas that include space for bus parking would be constructed at the following locations: Mugu Lagoon Visitor Center, Circle X Ranch Camp, Paramount Ranch, Gillette Ranch, White Oak Farm, Northern Gateway Visitor Center, Malibu Bluffs Visitor Education Center, Leo Carrillo State Park coastal education center and campground, Cheeseboro Canyon, Santa Monica/Pacific Coast Highway Visitor Information Site, and the Franklin Canyon Education Day Camp.

Cumulative Impacts

Similar to the no action alternative, traffic volumes would increase on the roads within and near the SMMNRA due to growth in the surrounding communities. The preferred alternative would add a negligible increment to traffic volumes and congestion, with no change in projected levels of service. Specific facility developments are expected to have only localized traffic impacts that would be mitigated through site design and access improvements. The wide dispersal of proposed facilities minimizes the potential for noticeable cumulative impacts.

Conclusions

Transportation impacts and changes in traffic volume attributable to the preferred alternative would be insignificant in the regional context. The shuttle system and other actions in the preferred alternative that

relate to facilitating public transit would help reduce growth in traffic volume and congestion along high-volume corridors resulting in a beneficial impact. These actions would also reduce the overall demand for expanded or new parking facilities at park sites within the SMMNRA.

Public Services and Utilities

Analysis

- **Public Services**

  Under this alternative, the demand for fire protection services would be similar to, or slightly higher than current service demands. The preferred alternative proposes the construction and operation of several park facilities (e.g., Mugu Lagoon Visitor Education Center, Circle X Ranch, and Leo Carrillo State Park Coastal Education Center). According to the VSS and Los Angeles and Ventura Counties, who provide fire protection and emergency response services to the SMMNRA, the development of the new and modified park facilities would require additional fire protection facilities or personnel. With respect to different management intensity areas (changes in land use policies) proposed as part of this alternative, approximately 80 percent of the park area would be designated as "low intensity" as compared to approximately 30 percent with the current conditions. The increase in low intensity areas could be perceived as more "fire-defensible" than current conditions. Moreover, with the increase in low intensity areas, emergency events could be expected to decrease over the long term.

  Based on the availability and capability of increased fire protection and emergency response systems to service the new park facilities, coupled with an expectation that a change in land use policy (with a greater emphasis on low intensity areas) could result in a potential decrease in emergency events, only moderate impacts to fire protection services are expected with this alternative. These impacts would be mitigated through increased fire awareness for park visitors, including signs and public information, and limiting storage of combustible, flammable materials onsite. With implementation of the mitigation measures and development requirements, impacts would be reduced to negligible impacts.

  Police protection services would be expected to remain similar to current service levels with implementation of the preferred alternative. As described above, a change in land use policy (with a greater emphasis on low intensity areas) could result in a potential decrease in emergency events and consequently police protection needs. Based on the type of new park facilities, a significant demand on existing police protection services would not be expected and only minor impacts would be expected. These impacts would be mitigated through NPS VSS consultation with the Los Angeles and Ventura County Sheriff Departments to ensure adequate police protection services. With implementation of the mitigation measures and development requirements, impacts would be reduced to negligible impacts.

- **Water/Wastewater**

  The preferred alternative proposes the development of several park facilities that would require an increase in potable and non-potable water demands. While the precise rate of water consumption for these facilities is not known, it is estimated that only a relatively small increase in water demands compared to existing water demands would be required to support the proposed land uses and facilities. Based on discussions with the Las Virgenes Municipal

Table 24

PREFERRED ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
Mugu Lagoon Visitor Education Center	The proposed facility would not generate any measurable amount of new vehicle trips, although it would generate several new bus trips per day. The proposed facility would have direct access from PCH including designated left and right turn lanes. A minor amount of traffic congestion would be created by traffic turning into and out of the site.
CSUCI Research and Information Facility	This facility on the outskirts of the SMMNRA would increase the volume of traffic on West Potrero and Potrero Roads and would increase the amount of traffic congestion at the major intersections along these corridors
Expand Circle X Education Camp	Expansion of the camp would result in a minor number of new vehicle trips in this portion of the SMMNRA including one or two new bus trips. This expansion would create a negligible increase in traffic volumes on Little Sycamore Canyon Road and Yerba Buena Road.
Redesign Leo Carrillo Campground	This action would not generate any new vehicle trips and would change the exiting traffic patterns in the area.
Paramount Ranch Film History Education Center	The proposed facility improvements are expected to increase the number of visitors who stop at this location. It would create a minor increase in the traffic volumes on Cornell Road and the central portion of Mulholland Highway. It would also increase the amount of turning movements at the Cornell/Mulholland intersection. This increase in traffic would not change the Level of Service provided by the adjacent corridors nor the Cornell/ Mulholland intersection.
Las Virgenes Environmental Education Center	This new facility, which would be operated by the Las Virgenes Institute, is proposed to be constructed as part of a new housing development bordering the park in Las Virgenes Canyon. This new facility would not generate any new vehicle trips into the area and would not create any noticeable traffic impacts.
Gillette Ranch Joint Administrative and Environmental Education Center	This new facility would create a redistribution of the administrative trips that currently occur at the State Park and NPS headquarters. All of the NPS administrative trips that occur in the Thousand Oaks area would now occur on the roads leading to the Soka Site. The redistribution of the State Park administrative trips would not dramatically change the traffic patterns in the area. The new Education Center would generate a minimal amount of new trips into the area including several bus trips per day. The net result of this action would be a minor increase in traffic volumes on Las Virgenes and Malibu Canyon Roads, and a moderate increase in traffic on a short segment of Mulholland between the intersection of Las Virgenes and the entrance to the Soka site. There would be an increase in the turning move ments at the Las Virgenes/Mulholland intersection. This change would not result in a change in the Level of Service provided by the intersection. The traffic changes would not create any notable traffic congestion. The change would eliminate the turning movements that currently occur on Malibu Canyon Road at the existing State Park Headquarters site thereby reducing traffic congestion in that area.

(cont'd) **Table 24**

PREFERRED ALTERNATIVE – TRAFFIC IMPACTS

Malibu Bluffs Visitor Education Center	The creation of this new visitor center would create a small number of new trips into the area resulting in a negligible increase in traffic volumes on PCH. Activity at the new center would increase the turning movements at the signalized intersection of Malibu Canyon Road and PCH, but would not result in a change in the Level of Service provided by the intersection.
Scenic Coastal Tour	The coastal boat tour would begin in the Malibu Pier area and travel along the coast of the SMMNRA. Visitors taking the tour would park their vehicles in existing parking areas near the Pier. This tour would generate a minimal amount of new vehicle trips into the area. The tour would result in a negligible increase in traffic volumes on PCH. Turning movements into parking areas near the pier and on-street parking maneuvers along PCH would increase during the times when the tour is in operation. This action would cause a minor amount of traffic congestion during times before and after the tour when the visitors are attempting to enter or exit the parking areas.
Franklin Canyon Education Day Camp	This action would involve expanding the facilities and programs at the existing camp. This would result in one or two additional bus trips into the area per day during times when the camp is active. This would create a negligible increase in traffic on Franklin Canyon Drive and portions of Mulholland Drives. The overall traffic impacts would be negligible.
White Oak Farm History Museum	This new facility would generate a negligible amount of new traffic into the area including one or two bus trips per day. This action would not create any measurable traffic congestion or impacts.
LAX Visitor Contact Site	This new visitor information site would be in the terminal at LAX international Airport. This new facility would not generate any new traffic nor create any traffic congestion problems.
Downtown Los Angeles Visitor Contact Station	This new visitor contact center would not generate any new traffic nor create any traffic congestion problems.
Rancho Sierra Vista/Satwiwa	This education day camp would be adaptively reused as an environmental/contemporary Native American culture education day camp. The expansion of this facility would generate a minor amount of new vehicle and bus trips into the area on days when major activities are scheduled. This action would result in a minor increase in traffic on Potrero.
415 PCH (Marion Davies House)	This facility would have a new parking area that would accommodate regular passenger vehicles and several buses. The presence of this new facility would not create any new trips to the area, although it would generate turning movements at the access location on PCH. Pacific Coast Highway consists of six travel lanes and a center turn lane in the vicinity of the proposed site. As part of this action the center turn lane would be converted into a designated left turn lane for vehicles entering the facility. Vehicles turning into and out of this new facility would create additional traffic congestion on PCH.

(cont'd) **Table 24**

PREFERRED ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
Morrison Ranch House and Cultural Landscape Restored	This proposed facility would not generate any direct traffic impacts because the proposed ranch house restoration and its cultural landscape would not be accessible to visitors by vehicle. The facility would be accessible via a pedestrian trail from the Cheeseboro Canyon/Palo Comado Canyon trailhead. A minimal amount of additional traffic might be generat ed at the Cheeseboro trailhead parking facility (see the analysis below for improvements at Cheeseboro).
Environmental Education Day Camp at Solstice Canyon	This proposed program would not generate any measurable traffic impact. It is envisioned that students would arrive via bus and that the program would occur seasonally, perhaps one day a week or less. Thus, the program would generate only a handful of trips per week at most. Park facility improvements to be constructed during 2002 will greatly enhance vehicular circulation, accommodate school buses, and increase the amount of visitor parking at Solstice Canyon.-
Backbone Trail Completion and eight additional group and/or individual sites	Completion of the remaining 5 miles of the 60-mile Backbone Trail and related campsites would not have measurable traffic impacts. Vehicular access will continue to be provided at a number of existing facilities, and the remaining segment of the trail that is to be completed does not intersect any major roadways. The trail does cross Yerba Buena Road in the general vicinity of the existing Backbone Trail, Mishe Mokwa, and Circle X trailhead parking lots. These facilities would continue to be at or near capacity on weekend days when seasonal temperatures are cooler.
Leo Carrillo Visitor Education Center	This facility would create only minor impacts and good levels of service would be maintained. Access to the site is provided via the Pacific Coast Highway, which provides two travel lanes in each direction and a center turn lane at this location. Traffic volumes of less than 12,000 vehicles per day along this portion of the PCH are only a fraction of the volumes experienced east of Malibu Canyon Road. During project design, a dedicated westbound left turn lane would most likely be created with new road striping. A right turn deceleration lane would also be considered. A dedicated westbound left turn lane would most likely be created pending a site plan.
Expansion of Cheeseboro Trailhead and Liberty Canyon Accessible Trail	This project would alleviate current parking shortages and off-site parking impacts by adding substantial parking. Subject to development of a specific plan, parking would likely increase from roughly 70 to 110 parking spaces plus 10 parking spaces for vehicles with horse trailers. Minor increases in traffic volume on Cheeseboro Road, a dead-end street serving residential and park uses, would be attributable to the additional parking. These projected increases and their impacts have been analyzed by Los Angeles County staff in consultation with the affected community. The impacts were determined to be acceptable and manageable.
Mission Canyon Trailhead Development	This project would not have a significant impact on traffic volumes on Sepulveda Boulevard, a high-volume arterial street that serves as an alternate to Interstate 405. The site has ample parking and access improvements at the point of ingress would be considered as part of the reclamation and reuse of this former landfill site.

(cont'd) **Table 24**

PREFERRED ALTERNATIVE – TRAFFIC IMPACTS

Temescal Canyon Educational Day Camp Expansion	This project would not have a significant impact on traffic volumes on Sunset Boulevard, which currently exceed 28,000 vehicles per day in this vicinity. Further, day camp activities would be focused in the summer months when volumes of commuter traffic on the adjacent street are significantly lower than at other times of the year.

Water District (LVMWD), which is a major provider to the SMMNRA, adequate water supplies and facilities exist to support the projected water demands of this alternative. In some cases, groundwater wells could also supply potable water. With respect to wastewater services and facilities, the LVMWD could provide wastewater service to the new park facilities within the SMMNRA. Based upon the expected wastewater generation rates as part of the preferred alternative, the LVMWD facilities have adequate capacity and facilities to support this alternative. Alternatively, on site sewage disposal systems that tied into LVMWD trunk lines could be used for most of the facilities. Based on the available capabilities provided by LVMWD, only negligible impacts to water and wastewater services are expected with the preferred alternative. These impacts could be further reduced by providing onsite groundwater wells, and water storage and wastewater disposal systems as necessary during facility planning stages.

- **Waste Management**

  Under the preferred alternative, the level of waste management service would be expected to increase slightly from current generation rates. According to Los Angeles County, which owns the Calabasas Landfill, adequate solid waste capacity is available. Based on the relatively small amount of solid waste generated as part of this alternative, plus the available capacity of regional landfill facilities, only negligible impacts to waste management services and facilities would be expected as a result of this alternative. These impacts would be further reduced through identifying the location of the nearest solid waste facility with capacity to handle additional waste flow and confirmation of available solid waste capacity for each facility at the planning stage.

- **Energy**

  As discussed in the energy section of the Affected Environment chapter, energy resources applicable to this analysis include natural gas, electric energy and gasoline. The preferred alternative would result in a relatively small increase in electric and natural gas consumption. The amounts of fuel used to implement this alternative would be minimal when compared to the consumption rate of the entire Los Angeles Basin. Moreover, the use of energy for facility construction would cease at the end of construction activities. Adequate electric and natural gas transmission facilities and capacity is available for land uses and facilities associated with this alternative. Based on the available facilities and adequate

capacity, only negligible energy impacts are expected as a result of this alternative. These impacts would be further reduced through minimizing energy consumption on park lands, confirming availability of energy supply from local utilities, and possibly producing alternative energy supplies onsite (i.e., solar or individual generators).

Cumulative Impacts

Impacts similar to those discussed under the no action alternative would occur with implementation of the preferred alternative in conjunction with impacts of other actions. These cumulative impacts would be significant for public services and solid waste capacity, and minor for water supply and energy. However, the incremental impacts contributed by the preferred alternative itself would be negligible.

Conclusions

The preferred alternative would result in potentially moderate impacts to fire and police protection services. Negligible impacts to water, wastewater, solid waste, and energy would also occur. The mitigation measures discussed above would limit the level of impacts associated with the preferred alternative.

UNAVOIDABLE ADVERSE IMPACTS

Various negligible to minor adverse impacts have been identified after mitigation for soils and geology, water resources, floodplains, biological resources, paleontology, cultural resources, visitor experience, employment, and public services and utilities. These impacts are summarized in the "Analysis of Impacts" section in each resource discussion. The impacts are not expected to have an overall effect on the respective resources. Moderate to major impacts identified for the preferred alternative were related to visitor experience, and land use.

Increased visitor use in areas where new facilities would be developed is expected to cause increased traffic, crowding, and noise. This may have moderate adverse impacts to visitors that prefer to experience quiet and solitude.

Inconsistencies in locally designated l and uses and adjacent NPS prescribed management areas would result in moderate and major adverse impacts to land use. Major adverse impacts would occur where low use management areas are adjacent to designated for residential development. Moderate to major impacts would occur where moderate and high intensity use areas are adjacent to residential areas.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES

There would be minor irreversible or irretrievable commitments of biological resources and cultural resources. Vegetation, wildlife habitat, or archeological resources lost to development of permanent facilities, and on-going maintenance of roads and trails would result in irreversible/irretrievable commitments of resources.

Impacts identified for land use would involve permanent inconsistencies once areas designated for inconsistent development under local land use plans are developed. The management areas designated by the NPS would not result in irreversible/ irretrievable commitment of resources because local land use decisions would continue to control development of property not owned by NPS.

RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The preferred alternative would encourage limited short-term, primarily non-consumptive, uses of biological resources in

the vicinity of developed facilities. These uses do not come at the expense of long-term productivity. Because this alternative provides for a minimal amount of short-term uses of the SMMNRA, the constraints in this alternative on short-term uses would enhance the long-term productivity of the area to a higher level than the no action alternative.

Preservation Alternative

NATURAL RESOURCES

Air Quality

Analysis

The types of impacts on air quality resulting from proposed facility and trail development in the preservation alternative would be similar to the no action alternative. The proposed facilities and trail segment developments in the preservation alternative would have direct construction-related air quality impacts near construction sites. Air pollution emissions from construction activities would be generated as fugitive dust, or particulate matter, and diesel exhaust from heavy construction equipment. Air pollution emissions would be mitigated using one or more of the control measures identified in SCAQMD Rule 403, as appropriate. Any buildings with potential asbestos materials would be surveyed; if asbestos-containing materials were present, compliance with SCAQMD Rule 1403 would be accomplished, as appropriate, including notification to the district, and coordination with scheduling, disposal, removal, and handling procedures. See "Summary of Mitigation Measures Common to All Alternatives" section.

Air quality impacts due to construction emissions would be short-term in nature and would be minor due to the implementation of mitigation measures. Mobile source emission impacts would be negligible because there would be no significant change from existing conditions due to activities within the preservation alternative.

Cumulative Impacts

The proposed developments within the SMMNRA would not occur simultaneously and would result in temporary construction-related air pollution emissions, which would add to the existing ambient air pollution in and near construction sites. However, air quality impacts from construction activities would be minor after mitigation.

Conclusion

Facilities and trail segment development without mitigation could results in localized short-term moderate adverse impacts. Sensitive individuals could suffer from adverse health effects and visibility conditions in the park could be impacted. Following mitigation, impacts from construction activities would be minor. There would be no significant changes to the existing mobile source emissions within the SMMNRA from actions proposed in the preservation alternative. However, improvements in transit opportunities (park shuttle buses) and the use of alternative fuels in park fleet vehicles would slightly improve the existing air quality conditions within the SMMNRA.

Impacts on the park's air quality would not be impaired by actions proposed under this alternative.

Soundscapes

Analysis

- **Construction Impacts**

  Noise impacts would occur during construction and deconstruction/demolition phases of projects included in the preservation alternative. Typical noises during construction activity would include the mechanical noises and peak noise levels associated with construction equipment. Noise generated by demolition and

excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, constitute the most persistent sources of noise during construction projects. The noises associated with operating a D8 Caterpillar Bulldozer (85 dBA, at 50 feet), for example, and various construction equipment, can be roughly twice as loud as an average car. Some construction equipment and activities can produce sounds in excess of 100 dBA, typically in short bursts, but spread over the duration of the project. These effects would be 16 or more times as loud as a typical vehicle.

Sensitive receptors to noise in the preservation alternative include picnic areas and campgrounds, residential areas, schools, hospitals, churches, and libraries. Noise mitigation measures would be used to reduce impacts in noise-sensitive areas as much as feasible. See "Summary of Mitigation Measures Common to All Alternatives" section.

Cumulative Impacts

The largest noise source within the SMMNRA is from traffic using existing roadways. Alternatives considered would not alter the current fleet mix, frequency, or speed traveled on these roads. Construction projects proposed in the alternatives would not occur simultaneously. However there would be cumulative impacts related to construction noise added to existing traffic and other ambient noise levels in and near construction sites. These impacts would be temporary in nature and would be mitigated to the greatest extent feasible.

Conclusion

Construction noise might result in temporary short-term moderate to major impacts on ambient noise levels in and near construction sites. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, would constitute the most persistent sources of noise during construction projects. Noise impacts sufficient to cause annoyance, negatively impact visitor enjoyment, and/or interfere with regular conversations would occur in short episodes in and near construction sites. The NRA would take action to prevent or minimize all noise that, through intensity, frequency, magnitude, and duration, adversely affects the natural soundscapes and other park resources or values. Specific mitigation measures would be included in all facility development-specific plans.

The park's soundscapes would not be impaired by actions proposed in this alternative.

Soils and Geology

Analysis

- **Soils**

  The preservation alternative would be the most beneficial of all alternatives analyzed with respect to soils and geology. Eleven facilities would be added or modified in previously disturbed sites in compliance with environmentally sensitive criteria. The eleven new facilities include two in the western portion of the SMMNRA: Mugu Lagoon Visitor Center, CSUCI Research and Information Facility, and rehabilitation of the Leo Carrillo campground to be environmentally sensitive; five in the central portion: Paramount Ranch Film History Center, environmental day camp at Solstice Canyon, Cheeseboro Canyon trailhead, the accessible trail at Liberty Canyon, Morrison Ranch House, Gillette Ranch Joint Administrative and Environmental Education Center, and Malibu Bluffs Marine Visitor Education Center; and three in the eastern portion: William O. Douglas Outdoor Classroom, Temescal Canyon day camp,

Mission Canyon trailhead. There might be small areas of short-term, moderate adverse impacts from these activities due to cut and fill, grading, fuel management zones, and paving requirements, but not nearly to the extent under the preferred, education, and recreation alternatives, which all include more facilities.

The extent of impacts from facilities development would be similar to the no action alternative. These impacts are considered minor or moderate because construction sites would be small and localized, erosion would be limited to construction areas, and construction activities would be intermittent and temporary in nature. If these impacts occur in areas containing non-erodible soils, the effects would be perceptible, although their presence would not have an overall effect on soil resources in the SMMNRA. If, however, such impacts occur in areas with erodible soils, a noticeable effect on area soil resources could occur and moderate impacts would result.

New or expanded facilities for visitor use would be fewer in the preservation alternative than in any of the action alternatives, which would lower the risk and extent of potential soil erosion and damage to vegetation. Fewer visitors would reduce the risk of accidental or arson-caused fires, but fire could still pose a hazard in the intensely used areas. Impacts from visitor use are expected to be minor and continual. Fire management, fire suppression, and trail maintenance might create moderate, long-term adverse impacts on soil profiles and erosion. These effects are expected to be minor to moderate because they would occur intermittently and temporarily due to emergency fire suppression activities or unexpected fires and would be limited to affected areas. Erosion due to visitor use would also be limited to the immediate area. Such impacts would be minor in areas with non-erodible soils or low intensities of visitor use. because, although perceptible impacts may occur to soil resources due to slight erosion, these impacts would not have an overall effect on soil resources within the SMMNRA. Moderate impacts would be more likely to occur in areas with erodible soils or high visitor use due to the increased soil erosion. Shortening or eliminating some of the scenic corridor roads in the eastern portions of the SMMNRA would reduce the risk of fires and subsequent erosion. Although perceptible impacts may occur to soil resources due to slight erosion, these impacts would not have an overall effect on soil resources within the SMMNRA.

Erosion control measures such as sediment retention ponds, silt fencing, or slope stabilization techniques would be included in all facility development-specific plans and would be implemented for surface disturbing activities, such as facility construction or trail maintenance. The SMMNRA agencies would maintain and protect soil resources through minimal water use or use of reclaimed water. Adverse impacts on soils from management activities, maintenance, and visitor use would be minimized or avoided altogether through careful planning and enforcement. Visitor management and visitor education would be effective in minimizing many potential impacts. Fire clearance zones would be incorporated into the planning of developments. Educational efforts, such as posting fire hazard signs, should be effective in reducing the likelihood of visitor-caused fires.

Beneficial effects of the preservation alternative include plans to remove selected recreation area-related development, eliminating some fire roads, rerouting and revegetating trails in or near sensitive resources, and removing some nonhistoric roads and restoring them to a natural condition or reconfiguring them as low

impact trails. The removal of these developments and curtailing of visitor use in low intensity areas would allow for a decrease in soil erosion that would noticeably preserve area soil resources. This decrease would be anticipated to result in a moderately beneficial effect.

- **Geologic Hazards**

Unmitigated geologic hazards could impose potentially major long-term adverse impacts to public health and property after facilities and trail segment development. Potential impacts resulting from geologic hazards would be limited to areas where facilities would be added. This represents a reduction in possible impact areas to 11 facilities relative to the other alternatives that include up to 18 facilities. The principal hazards within the SMMNRA are ground shaking, landslides, debris flows, and ground failures resulting from liquefaction. These impacts would be considered major because there would be a potential for substantial human safety risk and property loss.

The primary mitigation for geologic hazards relative to proposed facilities development remains the same for all alternatives. This would include the avoidance of geologic hazard zones through careful siting of facilities, and minimizing hazard impacts through careful design and construction practices. All grading and construction plans would be submitted to qualified technical staff within the administering agencies for geologic and geotechnical review prior to approval. Geotechnical and geologic hazard investigations would be conducted prior to project implementation with a focus on projects in areas of concern. Such areas include projects involving hillside terrain, proximity to active or potentially active faults, and areas of possible liquefaction. New facilities would be sited to avoid geologic hazard zones. New facilities and the modification of existing facilities would be designed and constructed in compliance with all applicable state and federal building code standards.

Cumulative Impacts

Cumulative impacts to soil and geologic resources from the preservation alternative are similar to those described for the no action alternative and would continue to be minor, as identified in the list of project documents in the appendix. Though fewer facilities would be developed under the preservation alternative compared to the no action alternative, proposed facility locations are dispersed throughout the SMMNRA and are not expected to change cumulative impacts. Increasing the proportion of areas of low intensity use would have a minor beneficial effect on the cumulative environment.

Conclusions

Direct and indirect adverse impacts on soils and geology in the preservation alternative would be the lowest of all alternatives analyzed. Impacts from facility and trail segment development in this alternative are similar to the no action alternative and minor to moderate. With mitigation, impacts would be reduced to minor or negligible.

Potential beneficial effects would be greatest for the preservation alternative as compared to the other alternatives because the risk of fires and subsequent soil erosion would decrease throughout the recreation area.

Geologic hazards could impose adverse impacts on public health and property as a result of facilities and trail segment development and would be reduced to a minor level with mitigation.

Soil resources and exposure to geologic hazards on privately held land would largely depend upon local enforcement of land use and building permits by other local agencies.

The park's soils and geologic resources would not be impaired by actions proposed under this alternative.

Water Resources

Analysis

Among the action alternatives, the preservation alternative would have the least adverse effect on water resources within the SMMNRA. By placing more emphasis on the preservation of natural systems the likely pollutant and physical impacts from this alternative would be reduced relative to the no action alternative.

There are however, some potential adverse impacts from the proposed facilities such as visitor centers. These impacts are similar to the impacts related to facility development described in the no action alternative. The development of these areas could adversely affect water quality. Impacts could include an increase in the runoff volumes and rates from these areas, which could potentially cause streambed and bank erosion, habitat scour, and benthic smothering from the increased flows.

Accidental spills of fuel and other automotive fluids could occur during the servicing of construction equipment and could impact waterways if these activities are conducted near waterways or without berms or other means of secondary containment. Use of unsealed tracks and roads may also result in erosion risk. Impacts from the use of unsealed tracks/roads and other activities associated with visitor use and trail management activities could be moderate.

Runoff from these areas could contain pollutants such as hydrocarbons and heavy metals from vehicles, which are common in road runoff. These pollutants could cause a moderate long-term impact on aquatic life in the streams. These impacts would be moderate because they could potentially affect the quality of waterways and water bodies within the SMMNRA. They would occur only intermittently and would be limited to the areas surrounding roads and parking areas.

Direct short-term impacts could occur during construction phase of the proposed facilities. Clearing vegetation during construction and grading activities leaves soils exposed to erosion during rainfall, and these sediments could impact the stream turbidity by increasing suspended sediment levels, which could affect light penetration and visibility in the streams. Sandbagging and other erosion control techniques would be applied during construction, and work would not be done in the rainy season. Impacts are anticipated to be short-term and minor. These impacts would be considered minor because high levels of sediment would be expected to occur in small quantities, would be intermittent, and would be limited to the immediate area surrounding construction areas.

The high intensity use areas within the recreation area would pose the most adverse impacts on the water resources. However, the preservation alternative includes less high intensity area, and impacts would be reduced relative to the no action alternative. Moderate long-term benefits are anticipated as a result of reduced pollution sources from increasing low intensity use and reducing high intensity use areas compared to the no action alternative.

Rehabilitation of the campground in a riparian area could also result in moderate, short-term impacts to waterways while shifting of facilities is underway. Increased pathogen levels are also a potential moderate impact on the waterways from washroom facilities installed with septic systems. These systems would need to be designed and located away from the stream as much as possible to reduce impacts to a minor level.

Mitigation of these impacts would be applied in two phases, during construction,

and longer term, more permanent measures. Mitigation during construction would be achieved through development of a construction stormwater management plan by a qualified professional, which would emphasize careful planning of activities to minimize soil disturbance. The plan would be prepared for all construction activities affecting one of more acres and would include best management practices such as temporary on-site water treatment, such as silt fences, and sedimentation ponds. These measures could retain pollutants on-site and reduce the downstream impacts of construction. Fueling and servicing of construction equipment would not occur within 100 feet of a waterbody or drainage area unless adequate spill control/ containment is provided. Mitigation measures could also recommend on-site temporary water treatments, such as silt fences and sedimentation ponds. These measures could retain pollutants on-site and reduce the downstream impacts of construction.

Longer-term mitigation of potential impacts for the proposed facilities and trail segments would include treatment of the runoff from developed areas. This would minimize pollutants from vehicles from reaching the waterways. Restroom facilities would be planned to minimize the delivery of pathogens to groundwater and surface water. A qualified engineer would conduct a soils and engineering evaluation to support the location and design of all septic system repairs, upgrades and installations. The permanent mitigation measures would be planned and designed as part of the detailed design of the proposed facilities.

Cumulative Impacts

Adverse long-term moderate cumulative impacts to water resources from the preservation alternative would be similar to those described for the preferred alternative. The negligible contribution to cumulative water resources for the no action alternative would be even smaller under the preservation alternative.

Conclusions

The preservation alternative would have the least adverse effect on the water resources in the SMMNRA. By placing more emphasis on the preservation of natural systems, the likely pollutant and physical impacts from this alternative would be reduced relative to no action. Moderate impacts from proposed facilities such as the visitor center and increased trailhead parking could adversely affect the water quality of the water resources. Mitigation measures discussed in the analysis of impacts section would decrease adverse impacts to a minor level.

The park's water resources would not be impaired by the actions proposed in this alternative.

Floodplains

Analysis

The major drainages/floodplains in the SMMNRA as described in the Affected Environment chapter include Calleguas and Malibu Creeks as well as the Arroyo Sequit stream. The preservation alternative proposes the following facilities and uses in the vicinity of these floodplains that either include modified/new structures or would increase the access to and extended duration of activities (especially over night) in the floodplains.

- Mugu Lagoon Visitor Center is in the vicinity of the Calleguas Creek floodplain.
- Leo Carrillo State Park campground rehabilitation is in the Arroyo Sequit stream floodplain.
- Paramount Ranch Film History Museum, Gillette Ranch Joint Administration and

Environmental Education Center, the accessible trail at Liberty Canyon, and Malibu Bluffs Visitor Education Center are in the vicinity of the Malibu Creek floodplain.

Additionally, this alternative includes areas designated as high intensity use that encompass the Calleguas and Malibu Creek floodplains, and the Arroyo Sequit stream floodplain.

It is expected that the rehabilitation of the Leo Carrillo campground, which is in Arroyo Sequit Canyon, would entail naturalizing the stream and improved natural floodplain processes – natural flood cycles, habitat, depositions, scouring, etc. Capacity would be similar to what currently exists, so increased visitation would not be a factor. The stream tends to flood in the winter, which is the off-season for coastal camping, so visitation would likely be low at this time.

The specific locations for the structures and use areas for facilities listed above have not been determined. The intensity or severity of potential impacts would ultimately depend on these locations. Long-term moderate adverse impacts could occur by locating any one of the proposed facilities within a 100-year floodplain. This would be because increased access to the floodplain would further increase the potential for loss of life or property as a result of the increased potential for flooding.

These impacts could be reduced through mitigation. During siting of structures and use areas for proposed facilities and trail segments in the vicinity of a floodplain, an engineering evaluation would be conducted by a qualified engineer to identify the boundaries of the 100-year floodplain. Unless infeasible, structures and use areas would be located outside the floodplain boundaries. Facilities and trails within the 100-year floodplain would be closed 24 hours prior to a predicted 50-year, 24-hour storm event. NPS would use various warning systems and would patrol use areas within the floodplain prior to and during storms to ensure that these areas are not occupied. For example, VCFCD has operated a flood warning system since February 1979. The system is called "ALERT", an acronym for Automated Local Evaluation in Real Time, which was developed by the National Weather Services. In addition, signs would be provided at the floodplain boundary on trails and access roads alerting park users that they are about to enter an area prone to flooding during wet weather conditions.

Cumulative Impacts

The preservation alternative would result in flood-event impacts by potentially siting new structures and facilities within the 100-year floodplain. However, review of environmental documents for other ongoing or future development projects did not reveal potential for impacts to floodplains. Consequently, the preservation alternative would not result in cumulative impacts to floodplains.

Conclusions

The preservation alternative could result in potentially moderate adverse long-term impacts related to the proposed facilities and the designation of high intensity use that encompasses the Malibu and Calleguas Creek floodplains and the Arroyo Sequit stream floodplain. There could be moderate long-term impacts to floodplains related to the Leo Carrillo State Park campground rehabilitation. Mitigation measures, as discussed in the analysis of impacts section, would reduce the adverse impacts related to floodplains to minor.

The park's floodplain resources would not be impaired by actions proposed under this alternative.

Biological Resources and Wetlands

Analysis

- **Vegetation**

  Direct and indirect adverse impacts on vegetation in the preservation alternative would be the least damaging of all alternatives analyzed. Eleven facilities would be added or modified in previously disturbed sites in compliance with environmentally sensitive criteria. These proposed new facilities would have direct impacts on previously modified or ruderal vegetation, and presumably would not affect native vegetation. The new facilities include three in the western portion of the SMMNRA: Mugu Lagoon Visitor Center, and rehabilitation of Leo Carrillo campground to be environmentally sensitive; three in the central portion: Paramount Ranch Film History Center, Gillette Ranch Joint Administrative and Environmental Education Center, Morrison Ranch House cultural landscape, and Malibu Bluff Marine Visitor Center; and one in the eastern portion: WODOC. The specific biological resources affected by the development of projects within this alternative would be presented in separate NEPA/CEQA documentation prepared for each project, although some general consequences might include the impacts discussed in the following paragraphs and sections.

  There might be small areas of adverse impacts from these activities due to cut and fill, grading, fuel management zone, and paving requirements, but not to the extent described under the no action, education, and recreation alternatives, which all include up to 18 new facilities, or the preferred, which includes 16 facilities. The small areas of adverse impacts would affect vegetation around the fringes of previously disturbed areas, such as small patches of coastal sage scrub at the toe of a hillside that might be adjacent to a campground that is being expanded. Removal of disturbed vegetation likely would not result in substantially increased soil erosion (see soils and geology) compared to existing conditions. The vegetation in the proposed development sites would presumably be ruderal prior to implementation of the development plan and, therefore, would not result in eliminating additional native vegetation.

  Elimination of potential local sources of invasive exotic plants would be a beneficial effect. Impacts on native vegetation from facility development in the preservation alternative are similar to or less than the no action alternative, and would be of minor intensity. The impacts are considered minor because they would be localized and located in disturbed areas, which support few sensitive native species. With the rehabilitation of existing recreation area developments and planned restoration of already disturbed lands within the park, impacts on the net acreage of native vegetation occurring in SMMNRA would be beneficial.

  Visitor uses would be more widely distributed and reduced in some areas in this alternative in comparison to the no action alternative. This would lower the risk and extent of potential soil erosion and damage to vegetation and soil profiles resulting from wildfires. Unplanned fires resulting from visitor use would be reduced, but still would pose a moderate fire hazard to native vegetation in the intensely used areas adjacent to native habitats. The moderate impacts associated with fire hazards in intensely used parts of the SMMNRA is due to both fire suppression zones and the potential for damage to a limited extent of sensitive species or a large extent of non-sensitive species. The reduction of visitor activities in some areas would reduce the risk of fires and their resultant impacts in general.

Adverse impacts on native vegetation could result from requirements of fire management zones around developed structures. Los Angeles County regulations require a 200-foot fire suppression zone around structures built within chaparral vegetation. Natural vegetation is removed and replaced with fire-retardant landscape species from an approved plant palette. The intensity of this impact depends upon the size of the development area and its shape. These fire suppression zones would be permanent. Impacts from fires, fire management, and facility development in this alternative are considerably less than in the no action alternative, and would be of minor intensity.

About 80 percent of the SMMNRA would be designated as a low intensity area where visitor access to sensitive resources would be neither facilitated nor encouraged. Moderate intensity areas, which would act as a buffer between the low intensity areas and the higher use areas, would generally surround the low intensity areas. Many sensitive species in the low intensity areas would be exposed to reduced risk of impacts, which likely would be of minor or negligible intensity. This reduction in impacts would be expected because of the number of visitors to or near sensitive resource areas would be greatly reduced relative to the no action alternative. Typical edge effects would be less than the no action alternative because there would be fewer areas developed with new or refurbished facilities. These reductions in visitor access to low intensity use areas would decrease the potential for moderate impacts to sensitive species, and the impacts would instead remain localized and centered in disturbed areas, which support few sensitive native species.

The primary mitigation for proposed facilities and trail segment development is to avoid undisturbed native vegetation through careful siting of facilities. New development would be sited in previously disturbed areas, which would normally support stands of exotic vegetation, thereby avoiding or minimizing impacts on undisturbed native vegetation. The number of new developments in the preservation alternative would be the fewest of all the alternatives. A qualified individual would submit all grading and construction plans to the administering agencies for review prior to approval.

Areas temporarily disturbed during construction would be recontoured and revegetated with appropriate native plant species, and appropriate fire-suppression zones would be maintained around developed structures. Erosion control measures, such as the installation of siltation fences and sedimentation basins during construction in the rainy season (if unavoidable) would be implemented for surface disturbing activities, such as construction or trail maintenance.

Pre-project surveys would be conducted by qualified professionals prior to project implementation in the appropriate season for listed species, as well as other species of federal or state concern (listed in Table 13). Using the information produced by the pre-construction surveys, the administering agencies would consult with the USFWS and CDFG during the detailed planning phase of a project if any listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state-listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, ESA Section 7, or CWA Section 404/401 processes.

Monitoring by a qualified biologist would be required for surface-disturbing activities in or near sensitive vegetative resources (e.g., wetlands, listed species habitat). Best management practices would

be implemented during construction. For example, if construction would occur during the rainy season, temporary sedimentation retention basins could be required on some projects. In addition, servicing of construction vehicles could be prohibited within 100 feet of riparian corridors, or disturbances of native vegetation or the root zones of oak trees could be avoided by staking construction staging areas. Such measures, and others as appropriate, would ensure that impacts on biological resources due to construction would be avoided, otherwise mitigated, or that any effects would be negligible.

Adverse impacts on vegetation from management activities, maintenance, and visitor use would be minimized or avoided altogether through careful planning. Visitor management and visitor education programs, which would be developed and presented in the NEPA/CEQA documentation for each project, would be effective in minimizing many potential impacts. Fire clearance zones would be incorporated into the planning of developments. Educational efforts, such as posting fire hazard signs and distributing educational brochures, should be effective in reducing the likelihood of visitor-caused fires and their resultant impacts. If vegetation is lost or disturbed from any activity, the area would be rehabilitated or revegetated with species from an appropriate native plant palette. All of these adverse impacts would be much lower in the preservation alternative than for the no action alternative.

The preservation alternative includes the provision of initiating agreements with other land management agencies to protect the land north from Simi Hills into the Santa Susanna Pass area. Such agreements would potentially provide substantial additional protection to vegetation in the linkages within Ventura County. The no action alternative does not include this provision. If these agreements are implemented, the preservation alternative could potentially substantially increase the protection of vegetation to the north of the SMMNRA, providing for additional linkages to other open spaces, and at minimum, for archipelago (steppingstone) linkages to other dedicated open space in the north. This would be a major beneficial effect of providing habitats and foraging areas for sensitive biota, such as mountain lions and golden eagles. These species are especially dependent upon open space linkages because it would allow wildlife movement through much larger areas of habitat, and would noticeably enhance the population distribution and gene flow in the region.

In general, mitigation measures would be effective in avoiding or minimizing loss of natural vegetation, and permanent loss in the low intensity areas would be minor as result of the preservation alternative. Because most lands within the SMMNRA would be designated for low intensity use, impacts on biological resources throughout the recreation area would be reduced from levels expected in the no action alternative.

- **Wildlife**

Facilities and trail segment development would have direct, localized impacts on some wildlife species, especially those that are adapted to the use of disturbed habitats. Removal of such disturbed habitat would affect some wildlife, but such species would primarily be non-native. A few species of small mammals, birds, reptiles, and amphibians would be permanently or temporarily displaced by construction activities. Adjacent populations could be adversely affected as displaced wildlife attempt to inhabit off-site areas where other individuals are already established. With the reduction in the number of facilities that would be developed in this alternative, there is little potential for losses of habitat available

for endangered, threatened, rare or sensitive species of wildlife.

Potential impacts from facility and trail segment development in this alternative are less than in the no action and other alternatives, but could still range between negligible and major, depending on the extent of impacts to local sensitive species populations. Negligible or minor impacts would occur if only a small portion of habitat is affected, or if construction/ disturbance occurs during non-breeding seasons and individuals or populations are not noticeably affected. Major impacts could result, however, if a large proportion or critical area of the population is affected or if disturbance occurs during breeding seasons such that the viability of the population is threatened. Major impacts could also occur if sensitive or endangered species are impacted, even to a small extent.

Indirect effects from visitor use would include disruption of wildlife activities for some species, but would be substantially less compared with the no action alternative. These effects would be due to the increase in land dedicated to low intensity uses and the consequent decrease in visitor access to core habitat areas that support sensitive wildlife. Some species, such as deer and mountain lions, are particularly sensitive to human activity near water sources and might avoid water sources as a result of visitor activity. In this alternative, such interruptions would be less frequent, more localized, and typically result in minor to moderate impacts. The intensity of such impacts would depend on the presence of both species sensitive to human activity and the availability of alternative undisturbed habitat. Typical artificially produced edge effects where habitats come together would be less in this alternative than in the no action and other alternatives.

The main impact in the low use area would be from trail use. A "corridor" of human impact occurs on trails through natural areas. Impacts could include disturbance to wildlife through human sights, smells and noise. Mitigation measures would include monitoring by qualified staff of the visitor use of trails and possible institution of changes in use, including seasonal or complete trail closure.

Construction monitoring by a qualified biologist in areas supporting sensitive wildlife would reduce or prevent some impacts. Pre-project surveys would be conducted by a qualified biologist prior to project implementation in the appropriate season for listed species, as well as other species of federal or state concern (listed in Table 14). Using the information from the reconstruction surveys, the administering agencies would consult with the USFWS and CDFG during the detailed planning phase of a project if any listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, ESA Section 7, or CWA Section 404/401 processes.

Monitoring by a qualified biologist would be required for surface disturbing activities in or in close proximity to, sensitive wildlife resources (e.g., listed species habitat). Best management practices would be implemented during construction. Such measures as described in the mitigation section of the chapter that describes the alternatives would ensure that impacts on biological resources due to construction would be avoided, otherwise mitigated, or that any effects would be negligible.

- **Habitat Connectivity**

Implementation of the preservation alternative would greatly enhance the existence and connectivity of undisturbed habitats in the SMMNRA by creating very

large expanses of open space, with a nearly continuous connection along the entire east/west axis of the recreation area, all designated as a low intensity area. Such large expanses of natural habitat would promote healthy populations of numerous wildlife species, including sedentary species such as lizards, mice, rabbits, and insects, to name a few. It also would provide a major benefit to larger, more mobile species, such as coyotes, grey foxes, passerine birds, mountain lions, and deer. About 80 percent of the SMMNRA would fall into this category of land use. With much more restricted access in the recreation area, the overall risk of habitat alteration due to fire would be reduced significantly.

Boundary adjustments and programmatic agreements under this alternative would also enhance habitat connectivity by identifying areas needed for future preservation within the region. One major habitat connection of regional importance connects the Santa Monica Mountains north through Simi Hills to the Santa Susanna and San Gabriel Mountains. Pending legislation will include upper Las Virgenes Canyon and Liberty Canyon in the SMMNRA boundary, which are vital portions of this wildlife corridor. Overall, the preservation alternative would benefit wildlife movement and gene flow compared to the no action alternative. These beneficial effects would be considered moderate to major. Moderate effects would occur if movement is enhanced and noticeably increases the distribution of a sensitive species, while major effects would result if the preservation of a particular corridor enhances the regional population and/or viability of a sensitive species. This configuration of designated use areas could reduce impacts on specific wildlife species from human activities by perhaps one or more levels of intensity (major to moderate, moderate to minor, minor to negligible) for many species when compared with the no action alternative.

As with the no action alternative, the primary mitigation to offset impacts from new development would be to avoid sensitive habitats and habitat linkage areas through careful project siting. Facility development projects and infrastructure would be placed away from sensitive biological resources. A qualified biologist within the administering agencies would evaluate all proposed actions for their affects on habitats and on habitat connectivity to avoid further habitat fragmentation. New developments would be excluded from existing wildlife corridors, or minimized to the greatest extent practicable, to ensure the continued exchange of genes and individuals between wildlife populations within and adjacent to the SMMNRA. Degraded habitats within conserved linkage areas would be restored and blocked linkages may be recovered. For example, some previous wildlife corridors now blocked by roadways could be restored by installing undercrossings and planting adjacent vegetation.

The most effective means of maintaining habitat connectivity is through the maintenance of sufficiently wide (greater then 400 feet) habitat linkages between major blocks of habitat. Whenever possible, documented wildlife movement areas could be improved with the appropriate NEPA/CEQA documentation prepared for that project.

- **Wetlands**

Several of the proposed facilities included in the preservation alternative are near wetland resources:

- ***The Mugu Lagoon Visitor Education Center*** – would be sited between PCH and the lagoon within an already disturbed upland site. This facility

includes a perimeter boardwalk for visitor viewing of the lagoon and associated wildlife.

- ***Leo Carrillo State Park campground*** – is in a major drainage and riparian area. The rehabilitation or preservation treatment of this facility would be focused toward relocating selected campground activity areas away from riparian areas to allow for riparian habitat enhancement and restoration.
- ***Paramount Ranch*** – has a substantial riparian area that bisects it. Existing access through this riparian area would be maintained.
- ***Environmental Day Camp at Solstice Canyon*** – would interpret the adjacent wetlands.
- ***Accessible trail at Liberty Canyon*** – would also interpret the adjacent wetlands.

Impacts to wetland resources associated with this alternative are considered to be potentially minor to major and short term. Facilities and trail segment development would be located near, but not within, wetlands, whenever feasible. Minor impacts would be expected with uses adjacent to wetlands that have a slightly perceptible impact on wetland value or function but are localized or affect only edge habitats on non-sensitive species. Major impacts could occur, however, if a facility or visitor use area is located within a wetland and substantially decreases its function or value. The impacts under this alternative would be mostly associated with road improvements and would be minimized by avoidance to the extent practical. Major impacts to wetland resources are not expected because impacts associated with facility construction would be localized and sited outside wetland boundaries. The preservation alternative is expected to have slightly fewer impacts to wetlands than any of the other alternatives.

Wetlands and riparian habitats are considered sensitive resources to be conserved and enhanced wherever practicable. New facilities would be sited away from wetlands wherever practicable. Detailed wetland delineation in accordance with the Coastal Commission's definition of wetlands would be conducted by a qualified biologist prior to site engineering so that this information could be used during the site design process.

New facility infrastructure (water, sewer, roads, trails) would avoid wetland resources where upland alignments are available. Upland buffers between wetlands and facilities would be provided wherever practicable. Where existing facilities require long-term maintenance or enhancement (e.g., Paramount Ranch), siting of infrastructure improvements would minimize impacts to wetlands resources wherever practicable. Existing disturbed areas within the drainage reach associated with the facility would be utilized where avoidance of wetland impacts is not practicable. Opportunities to restore and enhance disturbed wetland resource areas adjacent to facilities would be identified during the site design process. Closure of selected roads and trails would provide opportunities for wetland restoration. Unavoidable impacts to wetland resources would be fully mitigated through the 404/401 and 1603 wetlands permitting process, which emphasizes avoidance and minimization of impacts prior to considering compensatory mitigation.

Cumulative Impacts

Cumulative impacts of the preservation alternative would be similar to those described under the preferred alternative and would remain minor, as identified in the listed project documents in the appendix . However, the SMMNRA's biological resources would benefit the greatest by implementation

of this alternative. Recreational uses would disturb some wildlife species, but at very low levels in comparison to the no action alternative.

Conclusions

Because most lands within the SMMNRA would be designated for low intensity use, impacts on biological resources throughout the recreation area would be expected to be minor and reduced from levels expected in the no action and other alternatives. In contrast to the no action alternative, the preservation alternative would result in a net gain of wetland and other native vegetation acreage as recommended boundary changes were implemented. Potential impacts due to facility siting and impacts to sensitive species could still range from negligible to major, however. The elimination of some camping in the recreation area would greatly reduce the risk of fires, and their resultant impacts, in the moderate and low intensity areas. Implementation of the preservation alternative would greatly enhance the existence and connectivity of undisturbed habitats in the SMMNRA by creating very large expanses of open space, with a nearly continuous connection along the entire east/west axis of the recreation area, all designated as a low intensity area. The mitigation measures discussed in the analysis of impacts section are recommended for the preservation alternative to reduce adverse impacts to biological resources and wetlands to minor.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national recreation area's establishing legislation, (2) key to the natural or cultural integrity or opportunities for enjoyment of the national recreation area, or (3) identified as a goal in this general management plan or other relevant NPS planning documents. Consequently, the NRA's biological resources and wetlands would not be impaired by actions proposed under this alternative.

Paleontological Resources

Analysis

The preservation alternative would result in less impact to paleontologic resources compared to any of the other alternatives. The 13 recreation area-related developments that are retained under this alternative contrast with the up to 18 that would be undertaken for other alternatives. Moderate to major beneficial effects to paleontologic resources would occur in part because these 13 facilities lie largely within previously disturbed areas. The extent of scenic corridor roads is less than the other alternatives except the no action alternative, also resulting in the reduction of impacts to paleontologic resources both directly and by reducing the risk of fire that would, in turn, result in a reduction of fuel management and fire suppression operations that could increase erosion.

Moderate adverse impacts to sediments possessing moderate to high paleontologic sensitivity may nevertheless occur from construction excavations, fuel management, and fire suppression operations. Limited disturbance of deposits with moderate to high paleontological potential would result in a perceptible impact that would be considered a moderate impact. Rerouting and revegetating trails would result in moderate adverse impacts to paleontologic resources in areas characterized by moderate to high sensitivity sediments, due to the potential for disturbing a limited extent of deposits with moderate to high paleontological potential. Impact mitigation would include the determination the paleontologic sensitivity of affected sediments by a qualified professional

during administering agencies geological and geotechnical review of grading and construction plans. If excavation were to occur in sediments that have high to moderate paleontologic sensitivity, monitoring by a qualified paleontologist would occur during excavation. If fossils were discovered, construction would halt in the immediate vicinity of the find until they were removed in a scientifically controlled fashion by a qualified paleontologist. Recovery of the scientific data potential of the fossils would reduce impacts to a minor level. Additional mitigation measures would include public education regarding the scientific and educational importance of fossils and enhanced awareness of enforcement of California State and NPS non-collection policies.

Beneficial effects under the preservation alternative include the slightly reduced visitor use levels relative to the no action alternative, which may result in the reduced minor impact of unauthorized collection of paleontologic materials. This collection would be considered a minor impact because facilities and high use intensity areas would be likely to encompass only limited deposits with moderate to high paleontological potential because of their location in previously disturbed areas and the limited public access to such sites within the SMMNRA. Activities that would occur on previously disturbed sediments and rock units and sediments possessing no or low paleontologic sensitivity would have no impacts to paleontologic resources.

Cumulative Impacts

The contribution to cumulative impacts from the preservation alternative would be localized and minor, after mitigation, similar to the no-action alternative, and would remain minor as identified in the listed project documents in the appendix.

Conclusions

The preservation alternative would result in less impact to paleontologic resources compared to any of the other alternatives. Moderate adverse short-term impacts to sediments possessing moderate to high paleontologic sensitivity is nevertheless expected from construction excavations, fuel management, fire suppression operations, rerouting and revegetating trails. The mitigation measures discussed in the analysis of impacts section are recommended to reduce all adverse impacts to minor.

The park's paleontological resources would not be impaired by actions proposed under this alternative.

CULTURAL RESOURCES

Analysis

The emphasis of actions proposed under this alternative, for both cultural and natural resources is toward the protection of cultural and natural resources and the restoration of natural resources that are most easily damaged or rehabilitated. This could result in conflicts in the management of cultural and natural resources. If, in the resolution of such conflicts, it was determined that the protection and preservation of the natural resource(s) superseded that of the cultural resource(s), and that the removal of historic developments or preparation of the soil to restore Mediterranean ecosystem vegetation would result in direct impacts to historic and archeological resources (i.e., disturbance of archeological deposits), then Chapter 5, Section 5 of the National Park Service's *Management Policies* (2001) permits the planning process to make this decision:

> *Achievement of other park purposes may sometimes conflict with and outweigh the value of cultural resource preservation. The planning process will be the vehicle for*

weighting conflicting objectives and deciding that a cultural resource should not be preserved. Following such a decision, significant resource data and materials will be retrieved.

Impacts to cultural resources resulting from such decisions would be mitigated to the fullest extent possible in compliance with Section 106 of the National Historic Preservation Act and CEQA. Ecosystem restoration plans should therefore incorporate measures for mitigating impacts to cultural resources. Such measures would include avoidance or preservation, if possible or a suitable data recovery program. As a result of these measures, impacts would be kept to negligible levels.

Implementation of the preservation alternative, however, would also enhance the interpretive and educational components of the cultural resource management program. The number of visitor education opportunities are located on the perimeter of the park and exhibits would be expanded and use the newest technology to convey valuable information about the the park's resources. The development of stewardship programs could limit the destructive effects of vandalism through increased public involvement and awareness. This increased public sensitivity to the importance of the resources could potentially reduce impacts to a minimal level by instilling a greater understanding and appreciation of the resources.

The SMMNRA's outreach policy, which includes conducting programs for school-children, could be significantly expanded under this alternative, incorporating more information and values about cultural resources in the curriculum. This could help to build an enlightened constituency that would benefit resource preservation in the recreation area in the future.

The acquisition of lands or interests in lands by the administering agencies could benefit cultural resources by extending the protection of federal preservation laws, as well as by protecting viewsheds of cultural landscapes from inappropriate development adjacent to SMMNRA boundaries. Although cultural resources located on the acquired lands would be subject to the same impacts as sites on existing federal land, the level of protection would be significantly higher than under current private ownership. Administering agency staff would work with neighboring landowners and jurisdictions to ensure, to the extent feasible, that adjacent land management practices do not impair the recreation area's cultural resources, viewsheds, or distant vistas.

- **Archeological Resources**

  Archeological resources would be protected from the effects of development and visitor use, where possible. However, sites would remain susceptible to natural deterioration, inadvertent damage by human activity, and vandalism in backcountry areas. Some sites would eventually be lost. Further deterioration or destruction of archeological sites in the recreation area by natural forces or human activity would result in the loss of resource values associated with the prehistory and history of the region. Such impacts are expected to be negligible because this alternative would not increase public accessibility to archeological sites in the SMMNRA. With appropriate mitigation, these impacts could be further reduced.

  Re-routing existing trails away from known archeological resources could afford such resources more protection from inadvertent damage by human activity and from vandalism. To ensure that adequate consideration and protection are accorded archeological resources, archeological surveys would be conducted by qualified

state park or NPS archeologists prior to all ground disturbing activities, and archeological monitoring would occur where ground disturbance occurs in the vicinity of known or suspected, potentially significant archeological resources. If cultural materials were unearthed during construction activities, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed, if necessary.

If construction impacts on federal lands upon archeological sites cannot be avoided; mitigation would be implemented to include data recovery and consultation with concerned Native American Indian groups and the California SHPO.

If human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered on federal lands during facilities or trail improvements, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed.

Prior to construction, the area of potential effect (APE) for cultural resources would be defined, a record review conducted, and a pedestrian survey completed by a qualified state park or NPS archeologist. Mitigation measures, including avoidance or data recovery, would be proposed if resources are identified, and the SHPO would be afforded the opportunity to consult on measures for cultural resources protection and mitigation of adverse impacts. Monitoring by a qualified state park or NPS archeologist and a Native American Indian representative would accompany any ground disturbing construction. In the case of any unanticipated discoveries, all ground-disturbing activities in the vicinity would be stopped until the significance of the find is determined.

Management plans would incorporate measures to reduce or eliminate indirect and direct impacts to cultural resources to negligible levels. Such measures might include restrictions on access, signs, visitor education, or data recovery.

The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*.

- **Historic Structures**

Implementation of the preservation alternative would not impact the three historic structures within the recreation area's boundaries that are listed on the National Register of Historic Places – the Adamson House, Looff's Hippodrome (on Santa Monica Pier), and the Will Rogers House. The existing management and use of the structures would remain unchanged, and existing levels of visitation are not expected to appreciably increase. Although visitor use would be limited, minor indirect effects resulting from visitor use, including wear-and-tear and routine maintenance, would occur but would be kept negligible through proper management, use of historic materials and supplies, and other measures in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

Where feasible, other historic structures could be adapted for compatible contemporary use while preserving those features or elements of the structures that contribute to their historic significance. To meet Section 110 requirements (of the NHPA), the park would inventory and nominate structures to the National Register. The preparation of historic structure reports

by qualified individuals documenting the history and changes through time of structures would precede the adaptive rehabilitation or preservation treatment of any historic structure. Though adaptive reuse ensures that historic structures would survive, it could also result in the loss of historic fabric. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. Appropriate management following the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995) for rehabilitation or preservation treatment could eliminate or reduce these effects to negligible levels. Among other measures, materials removed during the rehabilitation or preservation treatment of historic structures would be evaluated to determine their value to the recreation area's museum collections and/or for their use in future preservation work at the sites.

The use of historic structures for interpretation or visitor services and concessions might result in increased deterioration of such resources through wear and tear. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. Appropriate management, however, as discussed above, could maintain these impacts at negligible levels. Furthermore, the interpretive and educational programs of the SMMNRA could promote understanding and appreciation of the value of the recreation area's historic structures, as well as provide guidance to how to experience such resources while minimizing impacts. In addition, determining and monitoring the carrying capacity of historic structures would result in the imposition of visitation levels or constraints that could contribute to the stability or integrity of the structures without unduly restricting their use or interpretation.

Making historic structures accessible to the mobility impaired, or making alterations to accommodate new concessions, could result in the loss of historic fabric or the introduction of new visual and non-historic elements. These impacts would be considered moderate because they would potentially involve only a few components of sites with historic integrity. Again, however, appropriate management could minimize these impacts by ensuring that appropriate materials and compatible designs are employed during alterations. To appropriately preserve and protect historic structures that are either listed on or potentially eligible for inclusion on the National Register of Historic Places, all preservation and rehabilitation or preservation treatment efforts, as well as daily, cyclical, and seasonal maintenance, would be undertaken in accordance with the National Park Service's *Management Policies* (2001) and *Cultural Resource Management Guideline* (1996), and the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). In addition, the preparation of historic structure reports, which document the history and changes through time of buildings and structures, would precede the adaptive rehabilitation or preservation treatment or restoration of all historic buildings and structures.

Actions undertaken to minimize erosion along historic roads and trails would be implemented in a manner that preserves the integrity of these cultural resources. Specifically, historically correct materials and designs would be used for erosion control, and/or erosion control devices would be appropriately screened from view, as per the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

- **Cultural Landscapes**

New use and facility development might be

introduced into many of the recreation area's potential cultural landscapes resulting in adverse impacts to cultural landscapes by disrupting or destroying historic settings or other characteristics of integrity. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. However, the careful design and use of compatible materials in the construction of new facilities, interpretive waysides, or trails, including consultation with cultural resource advisors and Native American tribes, would reduce or eliminate visual impacts upon the landscape. Although there would be an initial impact and a time lag until full vegetation establishment, the restoration of Mediterranean ecosystems under this alternative could enhance the attributes of cultural landscapes associated with traditional Native American Indian lifeways and beliefs. As a result, impacts would be negligible and of short duration.

The designation of Mulholland Drive, Malibu Canyon Road, and the Pacific Coast Highway from Malibu to Pt. Mugu as scenic corridors would encourage public interest in the corridor and its associated resources. This component action would entail its formal evaluation and documentation as a heritage corridor or cultural landscape, and would likely increase traffic along this route. As a result, this action could affect resources by compromising integrity of place and setting. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of these corridors and could be considered moderate impacts. Management through traffic control, access restriction, and similar measures, however, could reduce this impact to negligible levels.

- **Ethnographic Resources**

Ethnographic resource values are taken into consideration early in the planning process. Impacts to known ethnographic sites from proposed developments under the preservation alternative could be anticipated and planned for, with the intent of minimizing or eliminating impacts. Some sites, however, would remain susceptible to natural deterioration, inadvertent damage by human activity, and vandalism. These impacts would be considered moderate because they could potentially result in a perceptible degradation of a Native American site with moderate to high historic data potential. These impacts would require mitigation through avoidance, data recovery, or other measures. Consultation with and facilitation of Native American Indian participation in the interpretation of ethnographic resources would support the protection, enhancement, and preservation of ethnographic resources and the continuation of traditional cultural practices, as well as increase non-Indian knowledge and appreciation of traditional cultures.

- **Component Actions**

Component actions that are included under the preservation alternative are listed below, along with their potential impact on cultural resources and the mitigation measures necessary to minimize them. In most instances, however, the presence or absence of cultural resources has not yet been ascertained. As a result, the intensity of impacts cannot always be determined at this time.

1. ***Distribution of land with the intended use intensities: low 80 percent, moderate 15 percent, high 5 percent*** – The 80 percent of land designated as low intensity use, and the 5 percent of land designated for high intensity use, would increase the protection afforded to cultural resources by decreasing impacts associated with visitor activities compared to the no action alternative. No mitigation efforts for historic properties are required for

this component action. Devices used to limit visitor access would stress the protection of the natural and cultural resources of the SMMNRA. Inventory of federal lands under Section 110 of the NHPA would continue, however, while compliance with Section 106 of the NHPA, including inventory, evaluation, and impact assessment, would be followed for all planned undertakings in these areas.

2. ***The western escarpment of the Santa Monica Mountains, a portion of Ladyface, adjacent to the Oxnard Plains and the area around Las Virgenes Reservoir would be studied for inclusion in low intensity areas in the SMMNRA.*** – Chumash consultants have identified the western escarpment as a significant area in their traditions. Including these areas within the SMMNRA would extend the protection provided to cultural resources under federal ownership. These areas would also serve as buffers against adjacent development. No mitigation efforts for cultural resources would be necessitated by this component action. Inventory of cultural resources in the western escarpment of the Santa Monica Mountains and the area around Las Virgenes Reservoir would take place in compliance with Section 110 of the National Historic Preservation Act.

3. ***Boundary adjustment studies would also be conducted at western escarpment of the Santa Monica Mountains adjacent to the Oxnard Plains, and the southeast portion of the Calleguas Creek watershed, the southern part of Ladyface, the area east of Hidden Valley, Stone Canyon, the area north and west of Yerba Buena Road, Marvin Braude Mulholland Gateway Park, Mission Canyon, Getty Museum, Triunfo Canyon, and Conejo Valley for addition to the moderate intensity areas.*** – Some of these areas, such as Ladyface and Calleguas Creek, are significant cultural landscapes for Native American Indian groups affiliated with the area. The addition of these areas would extend to these cultural resources and cultural landscapes the protection offered by federal ownership. Based on the stated proposed action, no mitigation efforts for historic properties are necessary. Inventory of cultural resources on newly acquired acreage would take place in compliance with Section 110 of the National Historic Preservation Act.

4. ***Steelhead trout would be reintroduced in Calleguas Creek, Solstice and Malibu Creeks and Arroyo Sequit watersheds.*** – Local Native American Indian groups have identified these areas as cultural landscapes. The introduction of steelhead trout in Calleguas Creek would have no effect on cultural resources or the cultural landscape. No mitigation efforts would be necessary.

5. ***Watersheds and coastal resources would be protected and preserved through management practices and improvements.*** – Watershed improvements such as construction or revegetation activities might impact any historic properties present in these project areas if ground-disturbing activities take place on or near archeological sites, or these activities result in erosion of archeological deposits. The impacts would range from minor to major depending on the extent and depth of erosion, as well as the presence of significant cultural resources. The following mitigation measure is recommended:

   ✔ All construction or revegetation projects involving ground disturbance would be preceded by a cultural resource inventory, evaluation, and impact assessment program. If necessary, mitigation measures, including avoidance

or data recovery, would be developed and implemented. As a result, impacts could be kept to negligible levels.

6. ***The Backbone Trail would be completed and portions of the trail in sensitive areas might be rerouted to avoid those areas, or to minimize the length of crossing across the sensitive area.*** – Trail construction might adversely affect nearby archeological sites, historic properties and the cultural landscape, either through ground disturbance caused by trail construction, or through increased erosion, access, or vandalism could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if portions of the trails are sited through or adjacent to sites with high cultural potential. Rerouting trail segments away from sensitive areas would increase the protection and preservation of cultural resources within those areas. The following mitigation measure is recommended:

   ✔ A cultural resource inventory, evaluation, and impact assessment program conducted by a qualified landscape historian and state park or NPS archeologist would precede all ground-disturbing activities. If any resources are identified, mitigation measures, including avoidance or data recovery, would be developed and implemented. Concerned Native American Indian groups would be consulted regarding potential impact to cultural landscapes of traditional significance and would assist in developing appropriate mitigation measures.

7. ***Nonhistoric trails are to be rerouted in the vicinity of sensitive areas to avoid those areas.*** – Rerouting of trails away from sensitive areas could increase the level of protection afforded to historic properties in those areas. However, other sensitive cultural resources might be revealed during trail construction and might be adversely affected by construction activities. These impacts could range from negligible to major, depending on the data potential of affected sites and visitor use intensity. The following mitigation measures are recommended:

   ✔ A qualified state park or NPS archeologist or historical landscape architect would conduct a cultural resources inventory, evaluation, and assessment program before all trail construction. If any resources are identified, mitigation measures such as avoidance or data recovery, would be implemented. Native American Indian groups would be consulted regarding appropriate mitigation of potential impacts to cultural landscapes and places of traditional or sacred significance. To the extent possible, the trail would be constructed to avoid or minimize impacts to the traditional values of such places. As a result, such impacts are expected to be negligible.

8. ***Parking would be gravel or on permeable surfaces wherever feasible.*** – To the extent that paved parking surfaces could seal and protect buried cultural resources, gravel or permeable-surface parking areas would afford less protection in the same area. Lack of protection under this action, however, would be negligible. The following mitigation measure is recommended:

   ✔ A cultural resources inventory, evaluation, and assessment program conducted by a qualified NPS or state park archeologist or historical landscape architect would precede all grading and construction. If resources are identified,

such mitigation measures as avoidance or data recovery would be conducted.

9. ***Overnight use would continue to be permitted at Leo Carrillo State Park, Thornhill Broome Beach, Sycamore Cove, Circle X Ranch, Malibu Creek State Park*** – Several of these sites are near historic Native American Indian settlements. Archeological, ethnographic, or historic resources might be present at or near other locations as well. Overnight use of these areas might increase the potential for adverse impacts to historic properties, primarily through increased access that could result in a higher potential for inadvertent damage and vandalism, although impacts are expected to be negligible due to the current visitor use in the area and the localized characteristics of such impacts. The following mitigation measure is recommended:

   ✔ Management plans developed or amended to accommodate overnight uses in the vicinity of historic settlements would be reviewed by qualified staff for conformance with applicable federal, state, and local statutes and regulations regarding cultural resources. If necessary, these plans would incorporate measures to reduce or eliminate potential impacts to cultural resources. Such measures might include restrictions on access, signs, visitor education, or data recovery and would maintain those impacts at negligible levels.

10. ***Mugu Lagoon Visitor Education Center would be located at the western most end of the recreation area, off of the Pacific Coast Highway.*** – The proposed site would be in a previously disturbed area. A historic Native American Indian settlement of considerable cultural significance, however, is located in the vicinity and unidentified components of this site might be present in the proposed site area. If intact but unidentified subsurface deposits are present, construction and other ground-disturbing activities might severely impact them. The impact would be considered major because it would affect an entire site with high archeological data potential. As a result, further development in the area would be of concern to Native American Indians. The following mitigation measures are recommended:

    ✔ A cultural resources inventory, including subsurface exploration, would be completed prior to the finalization of plans associated with the Mugu Lagoon Visitor Education Center, to assess the potential to adversely impact archeological deposits in this area. If necessary, mitigation through avoidance or data recovery would be undertaken. Because the presence of absence of resources has not yet been ascertained, the intensity of impacts cannot be determined at this time.

    ✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would also accompany any ground-disturbing activities. In the event that unknown resources are encountered, all construction activities in the vicinity would be halted until the significance of the find is evaluated and an appropriate course of action is defined.

    ✔ To assist with visitor education, the Mugu Lagoon Visitor Education Center would include information on traditional lifeways and the significance of the settlement of Muwu to the cultural history of the area.

11. ***The campground at Leo Carrillo State Park would be rehabilitated to integrate the campground with natural riparian processes.***

– The rehabilitation of natural riparian processes would likely enhance the value of the area as a cultural landscape. However, historic properties might be impacted if rehabilitation involves subsurface disturbance. Such impacts, however, are expected to be negligible to minor, because of the low probability of such impacts affecting a site with high data potential. No mitigation would be required for activities that do not involve ground disturbance. The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*. The following mitigation measure is recommended for all rehabilitation activities that involve subsurface disturbance:

✔ A qualified state park or NPS archeologist would conduct an inventory, evaluation, and impact assessment program at the Leo Carrillo State Park site. If resources are identified, mitigation measures would include avoidance or data recovery.

12. ***Paramount Ranch would include facilities for a film history and administrative center. Parking and circulation are to be improved to accommodate visitation.*** – Paramount Ranch is a historic property and has been determined a significant cultural landscape eligible for listing on the National Register of Historic Places. Any construction or reconstruction might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character of the property. The following mitigation measures are recommended:

✔ Complete the cultural landscape report.

✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of the Paramount Ranch property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures could include avoidance, data recovery through Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation, reconstruction using historically appropriate materials, or similar measures, in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). As a result, impacts are expected to be negligible to minor.

13. ***The National Park Service and California State Parks would have a jointly operated administration and education center located at Gillette Ranch.*** – Gillette Ranch is a historic property located near a historic Native American Indian settlement. Any construction to accommodate this component action might cause the alteration, removal, or destruction of materials contributing to its historic significance. Depending on the nature and extent of new construction and the data potential of affected sites, resulting impacts to this property could be moderate to major in intensity. It is likely, however, that joint management activity could also promote the more

effective management of the cultural resources of the recreation area. The following mitigation measures are recommended:

✔ A cultural resources inventory, including subsurface exploration, would be completed prior to the finalization of plans associated with the administration and education center at the Gillette Ranch facility, to assess the potential to adversely impact archeological deposits in this area. If resources are identified, mitigation through avoidance or data recovery would be undertaken.

✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would also accompany any ground-disturbing activities. In the even that unknown resources are encountered, all construction activities in the vicinity would be halted until the significance of the find is evaluated and an appropriate course of action is defined.

✔ Concerned historic preservation groups would also be consulted and their input incorporated into the management plan for this facility.

14. A visitor center would be located at Malibu Bluffs. – Malibu Bluffs is in an urban area. However, it is in proximity to a historic Native American Indian settlement. The possibility of intact subsurface cultural deposits exists, which poses potential impacts from construction-related ground disturbance. Because of the minimal potential for affecting previously undisturbed archeological deposits with high data potential, these impacts would be considered minor. The following mitigation measures are recommended:

✔ Prior to the implementation of construction, a qualified state park or NPS archeologist would define the Area of Potential Effect (APE) for cultural resources, review records, and conduct a pedestrian survey of any exposed ground. Mitigation measures, including avoidance or data recovery, would be proposed if appropriate, and the SHPO would be afforded the opportunity to comment on measures for cultural resources protection and mitigation of adverse impacts.

✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing construction. In the case of any unanticipated discoveries, all ground-disturbing activities in the vicinity would be stopped until the significance of the find was determined. As a result, it is anticipated that any impacts could be kept to negligible levels.

15. The educational day camp program at the William O. Douglas outdoor education center in Franklin Canyon would be expanded. – If this expansion involves no subsurface disturbance to enlarge or improve facilities, no impacts to cultural resources would be anticipated. However, Franklin Canyon is a cultural landscape and a historic Native American Indian settlement is reported in the vicinity. Should expansion require land clearing and/or ground disturbance, those activities could moderately impact elements of integrity contributing to the significance of the cultural landscape, largely through the introduction of incompatible structures or other elements and/or directly impact historic properties such as the reported settlement through construction activities. The following mitigation measures are recommended:

✔ A cultural resources inventory, including subsurface exploration, would be completed prior to the

finalization of plans associated with this facility, to assess the potential to adversely impact archeological deposits in this area. If resources are identified, mitigation through avoidance or data recovery would be undertaken. Because the presence of absence of resources has not yet been ascertained. The intensity of impacts cannot be determined at this time.

✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing activities. In the even that unknown resources are encountered, all construction activities in the vicinity would be halted until the significance of the find is evaluated and an appropriate course of action is defined.

✔ Concerned historic preservation groups would be consulted and their input incorporated into the management plan for this facility.

16. ***Mulholland Highway, Malibu Canyon Road from Malibu Bluffs to its intersection with Mulholland, and the Pacific Coast Highway from Malibu Bluffs to Pt. Mugu would be designated as a scenic corridor.*** – Road improvements might be necessary, directly affecting cultural resources. In addition, once a road has been designated as a scenic corridor, visitation might increase and visitors might be more inclined to stop and explore along the route. These issues might impact historic properties, largely by compromising setting, feeling, and other aspects of integrity. These impacts are expected to be negligible due to the existing disturbed character of the area and the limited additional access that would occur to undisturbed cultural sites. The following mitigation measures are recommended:

✔ The documentation that would accompany the designation of the entire Mulholland Drive as a scenic corridor would provide information that could be integrated into the management of this resource. A cultural resources inventory, evaluation, and impact assessment, followed by mitigation through avoidance, data recovery, or other measures, if necessary, would precede all road improvements. Other effects might require mitigation through traffic control, access restriction, and visitor education. Regulations regarding protection of historic properties would be posted and included in handouts, pamphlets, brochures, or other printed materials intended for visitor use. As a result of these measures, impacts are expected to be negligible.

17. ***Rehabilitate the Morrison House to reflect the ranching period.*** – The Morrison House is a historic structure and may be eligible for listing in the National Register of Historic Places. Any construction or rehabilitation or preservation treatment might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character of the property. The following mitigation measure is recommended:

✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified archeologist, historical architect, or landscape architect, followed by mitigation if necessary. Mitigation measures could

include avoidance, data recovery through Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation, reconstruction using historically appropriate materials and prepared by an appropriate cultural resource specialist in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). As a result, impacts would be expected to be negligible to minor.

18. ***The eastern portion of the Mugu Lagoon would be considered for land transfer from the Department of Defense to the National Park Service.*** – Inclusion of this area within the recreation area would have no effect on the protection of cultural resources, given that the land is already under federal ownership. Inventory of cultural resources within newly acquired land would be required in conformance with Section 110 of the NHPA. No mitigation efforts for cultural resources would be necessitated by this component action.

Cumulative Impacts

As described under the no action alternative, a number of other past, present, and foreseeable future projects have potential for adverse impacts to cultural resources in the area. Environmental documents for these projects indicate that with implementation of mitigation measures, cumulative impacts on cultural resources from these projects would be less than significant. Under the preservation alternative, adverse impacts from visitor use and facility and trail segment development could add incrementally to impacts from other actions in the area. However, with implementation of mitigation measures, adverse impacts to cultural resources would be reduced to minor for this alternative. Consequently, impacts from the other actions in combination with impacts of the preservation alternative would result in minor cumulative impacts.

Conclusions

The preservation alternative offers a high level of protection to cultural resources given this alternative proposes the fewest facilities and that 80 percent of the lands are designated low intensity, 15 percent moderate intensity, and 5 percent high intensity. In addition, component actions under this alternative are largely designed to minimize impacts. As a result, there would be a decrease in the potential number of cultural resources that would be affected by project activities and mitigation. The potential for unintended damage without mitigation would also decrease with this alternative. Adverse impacts would be reduced to negligible with the mitigation discussed in the analysis of impacts section.

The park's cultural resources would not be impaired by actions proposed under this alternative.

VISITOR EXPERIENCE

Analysis

Under the preservation alternative, visitor experiences generally would reflect experiences described under the preferred alternative. However, the effective boundary of the SMMNRA would expand through acquisition of adjacent lands by fee title and conservation easement and protection of land north of the park through agreements with land management agencies. This may provide visitors with the opportunity to access new areas that offer a different experience to park users and therefore would be expected to have moderate to major beneficial effects on visitor experience. Expansion of the SMMNRA boundary, including acreage at Mugu Lagoon, could permit distribution of

visitors over a larger area, thereby decreasing the negative effects associated with increased visitation expected under the no action alternative and resulting in a minor impact due to the less frequent occurrence of crowding. These impacts could be further reduced by guiding visitors to high use areas and encouraging visitor use during less busy times.

Similar to the preferred alternative, educational programs under the preservation alternative would be increased to encourage sustainable use of park resources by visitors. Educational programs would be particularly expanded at facilities located at Gillette Ranch, Solstice Canyon, Rancho Sierra Vista, the coastal education center at Leo Carrillo, Mugu Lagoon, the Morrison House, and the accessible trail at Liberty Canyon. Such programs are expected to have moderate beneficial effects on visitor experience by encouraging visitors to responsibly enjoy resources in the SMMNRA while decreasing visual and auditory intrusions. In addition, a "virtual park tour" would be provided at visitor centers outside the SMMNRA. These virtual tours could focus visitors on destinations before entering the SMMNRA and perhaps slightly decrease traffic within the park, resulting in a minor beneficial effect.

As in the preferred alternative, a tour shuttle would travel a scenic loop, and connecting major points of interest in the park would possibly provide a moderate beneficial effect as visitors could view the park and relax, as opposed to driving their own vehicles. Recreational users would be able to park in designated lots and not face the difficulty of finding parking in the limited spaces throughout the recreation area. This would have an overall positive long-term effect.

This alternative is expected to have major beneficial effects on visitor experiences in low intensity areas. Large expanses of additional land could be opened to the public for non-damaging uses. Managing additional parcels for low intensity uses that are compatible with enhancement of wildlife habitats and populations would enhance opportunities to observe and photograph wildlife in those areas.

Restrictions on uses of areas currently managed for moderate intensity use may have moderate adverse impacts on visitors that enjoy multi-use trails and camping. Impacts could be reduced to minor by improving existing trails.

Cumulative Impacts

Cumulative impacts of the preservation alternative would be similar to those described under the preferred alternative. Impacts would be further reduced by the proposed boundary adjustments, but not enough to change the adverse cumulative impacts. The boundary adjustments and agreements to protect open space would contribute to the wildlands experience by enlarging the low intensity areas. Cumulative impacts would remain moderate.

Conclusions

The existing range of recreational visitor experiences would be maintained. Increasing the percentage of low intensity use areas and adjusting boundaries to include more undeveloped space, would help ensure that visitors have the opportunity to experience quiet and solitude. This might result in a major beneficial effect for those that seek that kind of experience. Mitigation measures for reducing impacts related to increased visitor use and restricting activities in areas previously dedicated to moderate intensity uses would reduce the adverse impacts to minor and are described in the analysis of impacts section.

LAND USE AND SOCIOECONOMIC ENVIRONMENT

Land Use

Analysis

Similar to the preferred alternative, the preservation alternative would provide for low intensity management of 80 percent of the natural systems present on recreation area lands and development of educational programs for public visitors and school systems. Large portions of park-related land uses and development would be removed and the land restored to its natural state. Trails located in sensitive areas would be re-routed and the land restored. The Backbone Trail would be completed and most other trails retained in their current state. Moderate intensity area buffer zones would comprise an estimated 15 percent of the recreation area lands and 5 percent would be allocated to high intensity area recreation area facilities. Compared to the no action alternative, areas managed for low intensity uses would be much more extensive, increasing from approximately 30 to 80 percent of the SMMNRA NPS lands. The preservation alternative includes 13 additional facilities, primarily located within high intensity management areas.

Implementation of the preservation alternative would involve several actions. Trails presently located in or near sensitive resources would be closed, re-routed and the land replanted. Non-essential non-historic roads would be closed and the land restored to its natural condition. Existing utility lines would be removed or placed underground and the land restored to its natural condition. Long-term maintenance of trails, utility corridors, campsites, and other facilities might involve motorized equipment. The NPS would provide law enforcement patrols on foot, bicycle, horseback and, where appropriate, vehicle. To protect natural areas from vehicle tracks and clearing or grading scars the NPS and emergency response authorities would agree to use precaution via memorandums of understanding.

As illustrated in Figure 7 – Preservation Alternative, the areas established by the NPS as low, moderate, and high intensity management areas remain the same in the preservation alternative as the preferred alternative. As a result, similar impacts due to inconsistencies between locally designated residential areas and adjacent low and moderate intensity management areas would occur. In addition, inconsistencies between designated open space and adjacent residential areas with high intensity management areas would be similar.

The land use inconsistencies between locally designated residential areas and adjacent low and moderate use intensity management areas could be partially mitigated by close coordination between NPS and local jurisdictions during land development policy and plan amendment processes to increase the consistency of land use management approaches.

The potential impacts associated with proposed facilities under the preservation alternative would likely be less than the preferred alternative due to an overall decrease in the number of proposed facilities. Impacts similar to those described under the preferred alternative would be expected, however, since a total of 13 facilities may be constructed if the preservation alternative is implemented.

High intensity management areas under the preservation alternative would be surrounded by both designated open space and residential land. As discussed in the no action alternative impact analysis, high intensity management areas are inconsistent with residential development, and would result in moderate to major impacts,

depending on the type of facility or use envisioned by the NPS and the surrounding residential development density.

Negligible to minor impacts would occur in high use management areas that are locally designated open space by depending on the focus of the open space area for urban recreation or resource protection. Impacts due to inconsistencies between designated residential and open space areas and high use intensity management areas would be similar to those discussed under the preferred alternative. Negligible impacts would result from high use management areas if an adjacent open space area has the primary goal of urban recreation because such uses/facilities would not substantially detract from the existing use of the area. More substantial impact could be expected if an open space area is dedicated to resource protection, however, because additional development and/or use nearby could diminish the role of the open space in protecting natural resources. However, these impacts would remain minor since the high use intensity designation and facility development would only occur on already disturbed or highly used sites, or at the perimeter of the parkland, and would therefore not greatly decrease the value of the open space.

In addition, high use intensity areas are not located adjacent to any locally designated habitat preservation areas, which minimizes the potential for impact to protected natural resources due to visitor use in high intensity areas or facilities. Activity within the SMMNRA would also be controlled, and would likely afford a higher level of protection than areas under local control. These impacts would be partially mitigated through the design of access within high use intensity management areas to direct visitor use away from areas primarily designated for resource protection.

Boundary adjustment studies are proposed for the area east of Hidden Valley in the southern portion of Thousand Oaks, Marvin Braude and Mulholland Gateway Park in the city of Los Angeles, and some of the lands around Las Virgenes Reservoir and Ladyface Mountain in the city of Agoura Hills. If these lands are added to the recreation area and the land is acquired by the NPS, the properties would be managed as moderate intensity areas and would be subject to the same use restrictions and public access opportunities. Boundary expansion in some areas would increase potential moderate and major impacts associated with the preservation alternative due to inconsistencies the additional lands would have with currently designated residential and open space land until the NPS acquires the land. Impacts associated with the boundary studies extending into the cities of Thousand Oaks, Agoura Hills, and Encino/Tarzana would be the same under the preservation alternative as described in the impact analysis for the preferred alternative. The creation of agreements between land management agencies to protect the area north into Simi Hills to Santa Susanna Pass could infringe on land currently designated as residential, commercial, and agricultural. Moderate to major impacts could potentially occur due to the inconsistencies between moderate intensity management areas and adjacent residential development, depending on the density of development planned for the area, as described under the impact discussion for the preferred alternative.

Major impacts could occur due to inconsistencies between the moderate intensity management zone and designated agricultural areas, since agricultural production precludes placing emphasis predominantly on the natural environment. Similarly, major impacts could result from inconsistencies between commercially

designated land and adjacent moderate intensity management areas because many of the activities described under the moderate intensity management areas would be precluded by commercial development.

Two smaller additional boundary studies are also proposed for the city of Los Angeles, one just south of the Getty Museum and the other in Stone Canyon. Expansion of the SMMNRA boundary in these areas would add to inconsistencies between moderate use intensity management areas and designated residential land, which would be a moderate to major adverse impact, depending on the density of development in the area.

Cumulative Impacts

Cumulative impacts are similar to those described under the no action alternative and are anticipated to be major. Although the preservation alternative proposes a number of additional park facilities, they would be located in disturbed areas and would not contribute appreciably to the overall development of the region.

Conclusions

The preservation alternative would increase areas managed for low intensity uses to 80 percent of the total SMMNRA area, while reducing those areas managed for high intensity uses to only 5 percent of the total area, compared to the no action alternative. Many of the same impacts associated with the preferred alterative would also be expected under the preservation alternative, since the NPS designated management areas are identical under both alternatives. Therefore, moderate to major impacts associated with inconsistencies between designated residential and open space and adjacent low and moderate use intensity management areas would occur. The impact discussion under the preferred alternative provides a detailed description of each of the land use impacts associated with the preservation alternative.

Due to the decrease in the number of proposed facilities included in the preservation alternative compared to the preferred alternative, reduced land use impacts could be expected to occur within the specific facility locations, depending on the actual sites selected for facility construction. Negligible to minor or moderate to major impacts would still occur due to inconsistencies between designated open space and residential areas, and adjacent high intensity management areas in which facilities would be located, respectively.

Potential moderate to major impacts associated with boundary studies under the preservation alternative would be greater under the preservation alternative as compared to the no action alternative. This increase is due, in part, to the larger potential expansion of protected land to the north of Las Virgenes and Cheeseboro Canyons and into the Conejo Valley, located in Ventura County.

The mitigation measures discussed in the analysis of impacts section would limit the expected impacts associated with the preservation alternative.

Population, Housing and Employment

Analysis

Population, housing, and employment projections for Ventura and Los Angeles Counties are based on the Southern California Association of Governments *Regional Comprehensive Plan* (RCP). The growth forecasts were produced using an iterative process. Regional forecasts were disaggregated to counties, subregions, cities and small geographic areas. The model used to produce small area forecasts allocates

growth to different areas based on their relative attractiveness. These forecasts were reviewed by local planning agencies (i.e., cities and counties) for consistency with zoning and local growth constraints such as topography, and adjusted to represent the best estimate of future growth.

Based on general plans for each of the participating local planning agencies, the steep terrain that characterizes the Santa Monica Mountains was cited as potentially undevelopable and often designated open space or, at most, the lowest residential density. Growth and development opportunities lie in the flat lands where vehicular access and public services are amply provided or easily extended. Local planning agencies use general plan policy and zoning regulations to discourage future residential, commercial, industrial and institutional development on terrain with physical constraints and natural resource value, a growth management approach reflected in the adjusted, published forecasts. The number of jobs created to staff new facilities would be small within the SMMNRA or surrounding region relative to the number of jobs in the region. Negligible impacts to population, housing, or employment would be expected because the number of jobs that would result from this alternative would not result in a detectable change to the employment opportunities in the region. For these reasons, selection of the preservation alternative is not likely to substantially alter local and regional population, housing and employment growth forecasts.

Cumulative Impacts

Similar to the no action alternative, no cumulative impacts would be anticipated on population, housing, or employment with implementation of the preservation alternative.

Conclusions

This alternative would not result in a change in population or housing within the SMMNRA or surrounding region. The number of jobs created to staff new facilities would be minimal within the SMMNRA or surrounding region. No mitigation measures are required.

Transportation

Analysis

- **Regional and Local Highway Network**

  In the preservation alternative several corridors would be designated as scenic corridors. These corridors would include PCH west of Malibu, Malibu Canyon Road to Mulholland, and the entire Mulholland Highway. Applying the scenic corridor designation to these corridors would not cause any significant increases in traffic volumes on any of the major corridors within the study area.

  All of the roads within and near the SMMNRA would continue to provide for visitor access. Commuter traffic patterns would not change as a result of actions taken in this alternative. Traffic volumes and the level of service provided by the roads in the SMMNRA would be similar to the no action alternative.

  The actions taken as part of this alternative would not produce any regionally significant traffic impacts. The significant traffic impacts occurring as a result of this alternative would be localized around the proposed education facilities. The preservation facilities and their related traffic impacts are described in Table 25.

- **Public Transit**

  A tour shuttle system would connect major points of interest in the SMMNRA. Visitors would be able to park at designated lots and

Table 25

PRESERVATION ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
Mugu Lagoon Visitor Education Center	The proposed facility would not generate any measurable amount of new vehicle trips, although it would generate several new bus trips per day. The proposed facility would have direct access from PCH including designated left and right turn lanes. A minor amount of traffic congestion would be created by traffic turning into and out of the site.
CSUCI Research and Information Facility	This facility on the outskirts of the SMMNRA would increase the volume of traffic on West Potrero and Potrero Roads and would increase the amount of traffic congestion at the major intersections along these corridors
Rehabilitation of Leo Carrillo Campground	This action would not generate any new vehicle trips and would change the existing traffic patterns in the area.
Paramount Ranch Film History Education Center	The proposed facility improvements would increase the number of visitors who stop at this location and create a minor increase in the traffic volume on Troutdale Road and the central portion of Mulholland Highway. It would also increase the amount of turning movements at the Troutdale/Mulholland intersection. It is estimated that this improved facility would generate about 100 new vehicle trips per day to this site including up to six buses. This increase in traffic would not change the Level of Service provided at the Troutdale intersection.
Gillette Ranch Joint Administrative and Environmental Education Center	This action would create a redistribution of the administrative trips that currently occur at the State Park and NPS headquarters. All of the NPS administrative trips that occur in the Thousand Oaks area would now occur on the roads leading to the Soka site. The redistribution of the state park administrative trips would not dramatically change the traffic patterns in the area. The new education center would generate a minimal amount of new trips into the area, including several bus trips per day. The net result of this action would be a minor increase in traffic volumes on Las Virgenes and Malibu Canyon Roads, and a moderate increase in traffic on a short segment of Mulholland between the intersection of Las Virgenes and the entrance to the Soka site. There would be an increase in the turning movements at the Las Virgenes/Mulholland intersection. This change would not result in a change in the Level of Service provided by the intersection. The traffic changes would not create any notable traffic congestion. The change would eliminate the turning movements that currently occur on Malibu Canyon Road at the existing state park headquarters site, thereby reducing traffic congestion in that area.
Malibu Bluffs Visitor Education Center	The creation of this new education center would create a small number of new trips into the area resulting in a negligible increase in traffic volumes on PCH. It is likely that this center would generate new school bus and tour bus activity in the range of four to six buses per day. Activity at the new center would increase the turning movements at the signalized intersection of Malibu Canyon Road and PCH. This would not change in the Level of Service provided by this intersection.
Franklin Canyon Education Day Camp Program	This action would result in one or two additional bus trips into the area per day during times when the camp is active. This would create a negligible increase in traffic on Franklin Canyon Drive and portions of Mulholland Drives. The overall traffic impacts would be negligible.

(cont'd) **Table 25**

PRESERVATION ALTERNATIVE – TRAFFIC IMPACTS

Rancho Sierra Vista/Satwiwa	This education day camp would be adaptively reused as an environmental/contemporary Native American culture education day camp. The expansion of this facility would generate a minor amount of new vehicle and bus trips into the area on days when major activities are scheduled. This action would result in a minor increase in traffic on Potrero.
415 PCH (Marion Davies House)	This facility would have a new parking area that would accommodate regular passenger vehicles and several buses. The presence of this new facility would not create any new trips to the area, although it would generate turning movements at the access location on PCH. Pacific Coast Highway consists of six travel lanes and a center turn lane in the vicinity of the proposed site. As part of this action the center turn lane would be converted into a designated left turn lane for vehicles entering the facility. Vehicles turning into and out of this new facility would create additional traffic congestion on PCH.
Morrison Ranch House and Cultural Landscape Restored	This proposed facility would not generate any direct traffic impacts because the proposed ranch house restoration and its cultural landscape would not be accessible to visitors by vehicle. The facility would be accessible via a pedestrian trail from the Cheeseboro Canyon/Palo Comado Canyon trailhead. A minimal amount of additional traffic might be generat ed at the Cheeseboro trailhead parking facility (see the analysis below for improvements at Cheeseboro).
Environmental Education Day Camp at Solstice Canyon	This proposed program would not generate any measurable traffic impact. It is envisioned that students would arrive via bus and that the program would occur seasonally, perhaps one day a week or less. Thus, the program would generate only a handful of trips per week at most. Park facility improvements to be constructed during 2002 will greatly enhance vehicular circulation, accommodate school buses, and increase the amount of visitor parking at Solstice Canyon.-
Backbone Trail Completion	Completion of the remaining 5 miles of the 60-mile Backbone Trail and related campsites would not have measurable traffic impacts. Vehicular access will continue to be provided at a number of existing facilities, and the remaining segment of the trail that is to be completed does not intersect any major roadways. The trail does cross Yerba Buena Road in the general vicinity of the existing Backbone Trail, Mishe Mokwa, and Circle X trailhead parking lots. These facilities would continue to be at or near capacity on weekend days when seasonal temperatures are cooler.
Leo Carrillo Visitor Education Center	This facility would create only minor impacts and good levels of service would be maintained. Access to the site is provided via the Pacific Coast Highway, which provides two travel lanes in each direction and a center turn lane at this location. Traffic volumes of less than 12,000 vehicles per day along this portion of the PCH are only a fraction of the volumes experienced east of Malibu Canyon Road. During project design, a dedicated westbound left turn lane would most likely be created with new road striping. A right turn deceleration lane would also be considered. A dedicated westbound left turn lane would most likely be created pending a site plan.

(cont'd) **Table 25**

PRESERVATION ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
Expansion of Cheeseboro Trailhead and Liberty Canyon Accessible Trail	This project would alleviate current parking shortages and off-site parking impacts by adding substantial parking. Subject to development of a specific plan, parking would likely increase from roughly 70 to 110 parking spaces plus 10 parking spaces for vehicles with horse trailers. Minor increases in traffic volume on Cheeseboro Road, a dead-end street serving residential and park uses, would be attributable to the additional parking. These projected increases and their impacts have been analyzed by Los Angeles County staff in consultation with the affected community. The impacts were determined to be acceptable and manageable.
Mission Canyon Trailhead Development	This project would not have a significant impact on traffic volumes on Sepulveda Boulevard, a high-volume arterial street that serves as an alternate to Interstate 405. The site has ample parking and access improvements at the point of ingress would be considered as part of the reclamation and reuse of this former landfill site.
Temescal Canyon Educational Day Camp Expansion	This project would not have a significant impact on traffic volumes on Sunset Boulevard, which currently exceed 28,000 vehicles per day in this vicinity. Further, day camp activities would be focused in the summer months when volumes of commuter traffic on the adjacent street are significantly lower than at other times of the year.

ride the shuttle to destination points. Consequently the shuttle system would have a beneficial impact by reducing traffic volumes in the park.

The preservation alternative does not include any actions that would directly change the amount or type of public transit service being provided within the SMMNRA. Actions at several locations would help to promote transit use by providing better bus access and bus parking facilities. These locations include the Mugu Lagoon Visitor Education Center, Paramount Ranch, Gillette Ranch Joint Administration and Environmental Education Center. Malibu Bluffs Visitor Education Center, and the Leo Carrillo coastal education center.

Under the preservation alternative the NPS would continue the policy of encouraging and supporting others in the development of additional public transit options for visitors to the SMMNRA and commuters passing through the SMMNRA.

- **Parking**

  New gravel (for low impact) and paved (for high impact) roadside pullout and parking areas would be created along the routes designated as scenic corridors. These new parking facilities would allow visitors to stop and enjoy the views and other recreational activities.

  New paved parking areas would be constructed at the following high impact locations: Mugu Lagoon Visitor Education Center, Paramount Ranch, Gillette Ranch Joint Administration and Environmental Education Center, Malibu Bluffs Visitor

Education Center. Solstice Canyon environmental education day camp, Cheeseboro Canyon trailhead, Leo Carrillo coastal education center, and the Mission Canyon trailhead.

Bus parking would be provided at the five sites mentioned in the transit section above.

Cumulative Impacts

Similar to the no action alternative, traffic volumes would increase on the roads within and near the SMMNRA due to growth in the surrounding communities. The preservation alternative would add a negligible increment to traffic volumes and congestion, with no change in projected levels of service. Specific facility developments are expected to have only localized traffic impacts that would be mitigated through site design and access improvements. The wide dispersal of proposed facilities minimizes the potential for noticeable cumulative impacts.

Conclusions

Transportation impacts and changes in traffic volume attributable to the preservation alternative would be insignificant in the regional context. The shuttle system and other actions in the preservation alternative that relate to facilitating public transit would help reduce growth in traffic volume and congestion along high-volume corridors resulting in a beneficial impact. These actions would also reduce the overall demand for expanded or new parking facilities at park sites within the SMMNRA.

Public Services and Utilities

Analysis

- **Public Services**

  Under this alternative, the demand for fire protection services would be less than the demands discussed under the preferred and no action alternatives. The preservation alternative proposes the addition of or modification to several park facilities (e.g., Mugu Lagoon Visitor Education center, Paramount Ranch Film History Center, Gillette Ranch, Leo Carrillo State Park Environmental Education Center, and other educational camps).

  According to the VSS and Los Angeles and Ventura Counties, who provide fire protection and emergency response services to the SMMNRA, the development of the new and modified park facilities could be served with no need for additional fire protection facilities or personnel. With respect to different management intensity areas (changes in land use policies) proposed as part of this alternative, approximately 80 percent of the park area would be designated as "low intensity" as compared to approximately 30 percent with the current conditions. Based on the land use designations proposed under this alternative, visitor access would be neither facilitated nor encouraged. Consequently, visitor use would be substantially reduced as compared to existing conditions. The increase in low intensity areas with the reduction of camping in the recreation area could be perceived as more "fire-defensible" than current conditions. Moreover, with the increase in low intensity areas, emergency events could be expected to decrease over the long term.

  Based on the availability and capabilities of existing fire protection and emergency response systems to service the new park facilities, and an expectation that a change in land use policy (with a greater emphasis on low intensity areas) could result in a potential decrease in emergency events, only minor impacts to fire protection services are expected with this alternative. These impacts would be mitigated through increased fire awareness for park visitors, including signs and public information, and limiting storage

of combustible, flammable materials onsite. With implementation of the mitigation measures and development requirements, impacts would be reduced to negligible.

Police protection services would be expected to remain similar to current service levels with implementation of this alternative. Because the majority of lands within the SMMNRA would be designated as low intensity areas, this alternative could result in a potential decrease in emergency events and consequently police protection needs. Based on the type of new park facilities, a substantial demand on police protection services would not be required and only negligible impacts would be expected. These impacts would be further reduced through NPS VSS consultation with the Los Angeles and Ventura County Sheriff Departments to ensure adequate police protection services. With implementation of the mitigation measures and development requirements, impacts would be reduced to negligible impacts.

- **Water/Wastewater**

The preservation alternative proposes both decommissioning and development of several park facilities. Based on the proposed changes in park facilities under this alternative, it would be expected that the demand for potable and non-potable water demands would be similar to or less than what is currently demanded. While the precise rate of water consumption for these facilities is not known, it is estimated that emphasizing low intensity uses would result in a reduction in water supply consumption. In cases where facilities would be developed or modified, only a small increase in water demands compared to existing water demands would be required to support the proposed land uses and facilities. Based on discussions with the LVMWD, which is the major provider to the SMMNRA, adequate water supplies and facilities currently exist to support the projected water demands of this alternative. With respect to wastewater services and facilities, the LVMWD could provide wastewater service to the new park land uses within the SMMNRA. Based on the available capabilities provided by LVMWD, only negligible impacts to water and wastewater services are expected with the preservation alternative. These impacts could be further reduced by providing onsite groundwater wells, water storage, and onsite wastewater disposal systems as necessary during facility planning stages.

- **Waste Management**

Under the preservation alternative, the level of waste management service would be expected to ultimately decrease from current generation rates. Based on the changes in land uses and the plan to decommission facilities, it could be expected that waste generation would be reduced under this alternative. While a small increase in waste generation could be realized possibly as a result of new but minor facility development, an overall reduction would be expected. Adequate solid waste capacity is available at regional waste management facilities. Based on the expected reduction in waste generation or the relatively small amount of solid waste generated as part of this alternative, plus the available capacity of regional landfill facilities, only negligible impacts to waste management services and facilities would be expected as a result of this alternative. These impacts would be further reduced through identifying the location of the nearest solid waste facility with capacity to handle additional waste flow and confirmation of available solid waste capacity for each facility at the planning stage.

- **Energy**

As discussed in the energy section of the "Affected Environment" chapter, energy resources applicable to this analysis include

natural gas, electric energy and gasoline. This alternative would result in a relatively small increase in electric and natural gas consumption related to construction and demolition activities. The amounts of fuel used to implement this alternative would be considered negligible when compared to the consumption rate of the entire Los Angeles Basin. Moreover, the use of energy for facility construction would cease at the end of construction/demolition activities. Adequate electric and natural gas transmission facilities and capacity is available for land uses and facilities associated with this alternative. Based on the available facilities and adequate capacity, only negligible energy impacts are expected as a result of this alternative. These impacts would be further reduced through minimizing energy consumption on park lands, confirming availability of energy supply from local utilities, and possibly producing alternative energy supplies onsite (i.e., solar or individual generators).

Cumulative Impacts

Cumulative Impacts similar to those discussed under the no action alternative would occur with implementation of the preservation alternative in conjunction with impacts of other actions. These cumulative impacts would be significant for public services and solid waste capacity, and minor for water supply and energy. However, the incremental impacts contributed by the preferred alternative would be negligible.

Conclusions

Impacts under the preservation alternative would be negligible to fire and police protection services, as well as water supply, waste management, and energy.

The mitigation measures discussed in the analysis of impacts section would limit the level of impacts associated with the preservation alternative.

UNAVOIDABLE ADVERSE IMPACTS

Various negligible to minor adverse impacts have been identified after mitigation for soils and geology, water resources, floodplains, biological resources, paleontology, cultural resources, visitor experience, employment, and public services and utilities. These impacts are summarized in the "Analysis of Impacts" section in each resource discussion. The impacts are not expected to have an overall negative effect on the respective resources. Moderate to major impacts identified for the preferred alternative were related to visitor experience and land use.

Increased visitor use in areas where new facilities are developed is expected to cause increased traffic, crowding, and noise. This may have moderate adverse impacts to visitors that prefer to experience quiet and solitude.

Inconsistencies in locally designated land uses and NPS prescribed management areas would result in moderate and major adverse impacts to NPS proposed land use. Major adverse impacts would occur where low use management areas adjacent to areas designated for residential development. Moderate to major impacts occur where moderate and high intensity use areas are adjacent to residential areas.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES

There would be minor irreversible or irretrievable commitments of biological resources and cultural resources. Vegetation, wildlife habitat, or archeological resources lost to development of permanent facilities, and on-going maintenance of roads and trails would result in irreversible/irretrievable commitments of resources.

The management areas designated by NPS, however, would not result in irreversible/irretrievable commitment of

resources. This would be because local land use decisions would continue to control development of property not owned by NPS.

RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The preservation alternative would encourage limited short-term, primarily non-consumptive, uses of biological resources in the vicinity of developed facilities. These uses do not come at the expense of long-term productivity. Because this alternative provides for a restricted level of short-term uses of the SMMNRA, the constraints in this alternative on short-term uses would enhance the long-term productivity of the area to a higher level than the no action alternative.

Education Alternative

NATURAL RESOURCES

Air Quality

Analysis

The types of impacts on air quality resulting from proposed facility and trail development in the education alternative would be similar to the no action alternative. The proposed facilities and trail segment developments in the education alternative would have direct construction-related air quality impacts near construction sites. Air pollution emissions from construction activities would be generated as fugitive dust, or particulate matter, and diesel exhaust from heavy construction equipment. Air pollution emissions would be mitigated using one or more of the control measures identified in SCAQMD Rule 403, as appropriate. Any buildings with potential asbestos materials would be surveyed; if asbestos-containing materials were present, compliance with SCAQMD Rule 1403 would be accomplished, as appropriate, including notification to the district, and coordination with scheduling, disposal, removal, and handling procedures. See "Summary of Mitigation Measures Common to All Alternatives" section.

Air quality impacts due to construction emissions would be short-term in nature and would be minor due to the implementation of mitigation measures. Mobile source emission impacts would be negligible because there would be no significant change from existing conditions due to activities within the education alternative.

Cumulative Impacts

The proposed developments within the SMMNRA would not occur simultaneously and would result in temporary construction-related air pollution emissions, which would add to the existing ambient air pollution in and near construction sites. However, air quality impacts from construction activities would be minor after mitigation.

Conclusions

Facilities and trail segment development without mitigation could results in localized short-term moderate adverse impacts. Sensitive individuals could suffer from adverse health effects and visibility conditions in the park could be impacted. Following mitigation, impacts from construction activities would be minor. There would be no significant changes to the existing mobile source emissions within the SMMNRA from actions proposed in the education alternative. However, improvements in transit opportunities (park shuttle buses) and the use of alternative fuels in park fleet vehicles would slightly improve the existing air quality conditions within the SMMNRA.

Impacts on the park's air quality would not be impaired by actions proposed under this alternative.

Soundscapes

Analysis

- **Construction Impacts**

  Noise impacts would occur during construction and deconstruction/demolition phases of projects included in the education alternative. Typical noises during construction activity would include the mechanical noises and peak noise levels associated with construction equipment. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, constitute the most persistent sources of noise during construction projects. The noises associated with operating a D8 Caterpillar Bulldozer (85 dBA, at 50 feet), for example, and various construction equipment, can be roughly twice as loud as an average car. Some construction equipment and activities can produce sounds in excess of 100 dBA, typically in short bursts, but spread over the duration of the project. These effects would be 16 or more times as loud as a typical vehicle.

  Sensitive receptors to noise in the education alternative include picnic areas and campgrounds, residential areas, schools, hospitals, churches, and libraries. Noise mitigation measures would be used to reduce impacts in noise-sensitive areas as much as feasible. See "Summary of Mitigation Measures Common to All Alternatives" section.

Cumulative Impacts

The largest noise source within the SMMNRA is from traffic using existing roadways. Alternatives considered would not alter the current fleet mix, frequency, or speed traveled on these roads. Construction projects proposed in the alternatives would not occur simultaneously. However there would be cumulative impacts related to construction noise added to existing traffic and other ambient noise levels in and near construction sites. These impacts would be temporary in nature and would be mitigated to the greatest extent feasible.

Conclusions

Construction noise might result in temporary short-term moderate to major impacts on ambient noise levels in and near construction sites. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, would constitute the most persistent sources of noise during construction projects. Noise impacts sufficient to cause annoyance, negatively impact visitor enjoyment, and/or interfere with regular conversations would occur in short episodes in and near construction sites. The NRA would take action to prevent or minimize all noise that, through intensity, frequency, magnitude, and duration, adversely affects the natural soundscapes and other park resources or values. Specific mitigation measures would be included in all facility development-specific plans.

The park's soundscapes would not be impaired by actions proposed in this alternative.

Soils and Geology

Analysis

- **Soils**

  Direct and indirect adverse impacts on soils and geology are anticipated from facilities and trail segment development in the education alternative. These impacts would be similar to the preferred alternative, although the education alternative has 19 facilities compared to the preferred alternative's 13. The proposed facilities

development in this alternative would be placed on disturbed sites and, therefore, would have direct impacts only on previously modified or disturbed soils. The new facilities are concentrated primarily in the central and western portions of the recreation area, with a visitor contact site near the eastern boundary of SMMNRA. In placing these facilities at already disturbed sites, there might be small areas of temporary adverse impacts from these activities due to cut and fill, grading, fire zone, and paving requirements. Impacts on soils and geology from facility development in this alternative are similar to the no action alternative; however, they affect a larger area due to the increased number of facilities. Impacts are anticipated to be short-term and minor or moderate without mitigation. These impacts are considered minor or moderate because construction sites would be small and localized, erosion would be limited to construction areas, and construction activities would be intermittent and temporary in nature. If these impacts occur in areas containing non-erodible soils, the effects would be perceptible, although their presence would not have an overall effect on soil resources in the SMMNRA. If, however, such impacts occur in areas with erodible soils, a noticeable effect on area soil resources could occur and moderate impacts would result.

Adverse impacts on soils could result from disturbance or removal of soils from fire management, fire suppression, and trail maintenance. Higher visitor use could mean a possible increase in fire potential, which might create additional erosional soil losses. Fire risk could also increase once the scenic corridors are lengthened in the SMMNRA, especially in the central and eastern portions of the area. The risk of fire could increase within Topanga Canyon, Malibu Canyon, Kanan Dume Road, Decker Road, and canyons leading into the Cheeseboro/Palo Comado areas. These effects are expected to be minor to moderate because they would occur intermittently and temporarily due to emergency fire suppression activities or unexpected fires and would be limited to affected areas.

Erosion due to visitor use would also be limited to the immediate area. Such impacts would be minor in areas with non-erodible soils or low intensities of visitor use because, although perceptible impacts may occur to soil resources due to slight erosion, these impacts would not have an overall effect on soil resources within the SMMNRA. Moderate impacts would be more likely to occur in areas with erodible soils or high visitor use due to the increased soil erosion and the increased potential for noticeable impacts that affect soil resources as a whole within the SMMNRA. Impacts on soil from fire management and facility development in the education alternative would be continual and minor to moderate; however the area of effect would be larger than the no action alternative, due to the increased number of facilities.

Increased soil erosion would result from increased visitor use. Despite local increases from the no action alternative due to the increased number of facilities, the impact would be beneficial overall because of the larger proportion of low intensity areas. This increase in low intensity areas would curtail visitor use and subsequent soil erosion, although localized impacts would continue in high intensity areas and around facilities. The impacts are anticipated to be minor and on-going because they would be localized.

Erosion control measures such as sediment retention basins, silt fencing, or slope stabilization techniques would be included in all facility development-specific plans and would be implemented for surface disturbing activities, such as construction or trail maintenance. The SMMNRA agencies

would maintain natural landscapes through minimal water use or use of reclaimed water.

Adverse impacts on soils from management activities, maintenance, and visitor use would be minimized or avoided altogether through careful planning and enforcement. Visitor management and visitor education would be effective in minimizing many potential impacts. Fire clearance and management zones would be incorporated into the planning of developments. Educational efforts, such as posting fire hazard signs, should be effective in reducing the likelihood of visitor-caused fires. Mitigation measures would reduce impacts to minor or negligible.

Beneficial effects of the education alternative include reducing soil erosion by removing some recreation area-related development. This would involve rerouting and revegetating nonhistoric trails in or near sensitive resources. This would potentially reduce runoff and decrease erosion. Decreased soil erosion from curtailed visitor use in low intensity areas is anticipated to be a moderate beneficial effect because the increase in the amount of land dedicated to low use intensity uses would decrease erosion in a large portion of the SMMNRA.

- **Geologic Hazards**

Unmitigated geologic hazards could impose potentially major long-term adverse impacts to public health and property after facilities development. The principal hazards within the SMMNRA are ground shaking, landslides, debris flows, and ground failures resulting from liquefaction. These impacts would be considered major because there would be a potential for substantial human safety risk and property loss. Four proposed facility sites might be in areas that could suffer impacts from geologic hazards. The exposure to geologic hazard is greater than the no action alternative due to the increased number of facilities associated with the education alternative.

The primary mitigation for geologic hazards relative to proposed facilities development remains the same for all alternatives. Mitigation includes the avoidance of geologic hazard zones through careful siting of facilities and minimizing hazard impacts through careful design and construction practices. New facilities would be sited to avoid geologic hazard zones. New facilities and the modification of existing facilities would be designed and constructed in compliance with all applicable state and federal building code standards. All grading and construction plans would be submitted to qualified technical staff within the administering agencies for geologic and geotechnical review prior to approval.

A qualified geologist would conduct geotechnical and geologic hazard investigations prior to project implementation with a focus on projects in areas of concern. Such areas include projects involving hillside terrain, proximity to active or potentially active faults, proximity to landslides and areas of possible liquefaction. New facilities would be sited to avoid geologic hazard zones. Avoidance of geologic hazard zones would reduce impacts to minor.

Cumulative Impacts

Cumulative impacts to soil and geologic resources from the education alternative would be similar to those described for the no action alternative and would continue to be minor, as identified in the listed project documents in the appendix. Though more facilities would be developed under the education alternative compared to the no action alternative, proposed facility locations would be in previously disturbed areas of the SMMNRA and are not expected to increase cumulative impacts. Increasing the proportion of areas of low intensity use would have a

minor beneficial cumulative effect on the environment.

Conclusions

Minor to moderate short-term impacts on soils and geology from facility development in this alternative are similar to the no action alternative but would affect a larger area due to the increased number of facilities. With the rehabilitation of existing recreation area developments, impacts of erosional soil loss should be beneficial. Impacts on soil from fire management and facility development in this alternative would potentially be greater than from the no action alternative, but would remain moderate.

Similar to previous alternatives, geologic hazards could impose major adverse impacts to public health and property as a result of facilities and trail segment development. This alternative includes more facilities and improvements than the no action alternative and would therefore increase potential exposure to geologic hazards.

Mitigation measures discussed in the analysis of impacts section would reduce impacts for soils and geologic hazards to minor.

Soil resources and exposure to geologic hazards on privately held land would largely depend upon local enforcement of land use and building permits by other local agencies.

The park's soils and geologic resources would not be impaired by actions proposed under this alternative.

Water Resources

Analysis

The education alternative would have adverse and beneficial effects on water resources within the SMMNRA. By reducing the high intensity areas relative to the no action alternative, the main sources of water pollution are reduced. This would be a moderate beneficial effect on the water resources. However, the proposed facilities (such as the visitor and education centers and campgrounds) might adversely impact the streams and rivers and would require mitigation. The potable water supply for new developments would need careful consideration in detailed designs to ensure extraction does not remove too much water such that downstream aquatic life is affected.

Impacts from the proposed facilities could include an increase in the runoff volumes and rates from these areas, which could potentially cause streambed and bank erosion, habitat scour, and benthic smothering from the increased flows. In addition, runoff from these areas could contain pollutants such as hydrocarbons and heavy metals from vehicles that are common in road runoff. These pollutants could cause moderate short- and long-term adverse impacts on aquatic life in the streams and rivers. These impacts would be moderate because they could adversely affect the quality of waterways and water bodies within the SMMNRA. They would occur only intermittently and would be temporary, however, and would be limited to the areas surrounding proposed facilities and road and parking areas. The area of effect of these impacts would be greater than the no action alternative due to the increased number of facilities.

Direct short-term minor impacts could occur during construction of the proposed facilities and trail segments. Clearing vegetation during construction and grading activities leaves soils exposed to erosion during rainfall, and displaced soils could impact the stream turbidity and suspended sediment levels, which could affect light penetration and visibility in the streams. These impacts would be considered minor because runoff high levels of sediment would be expected to occur in small quantities,

would be intermittent, and would be limited to the immediate area surrounding construction sites.

Accidental spills of fuel and other automotive fluids could occur during the servicing of construction equipment and could impact waterways if these activities are conducted near waterways or without berms or other means of secondary containment. Increased use of unsealed tracks and roads may also result in erosion risk. Impacts from the increased use of unsealed tracks/roads and other activities associated with increased visitor use and trail management activities could be moderate. The effects would be greater than the no action alternative due to the increased number of proposed facilities.

Mitigation of these impacts would be applied in two phases, during construction and longer term, more permanent measures. Mitigation during construction would be achieved through development of a construction stormwater management plan by a qualified professional that would emphasize careful planning of activities to minimize soil disturbance, and recommend on-site temporary water treatments, and sedimentation ponds. The plan would be prepared for all construction activities affecting one of more acres and would include best management practices such as temporary on-site water treatment, silt fences, and sedimentation ponds. Fueling and servicing of construction equipment would not occur within 100 feet of a waterbody or drainage area unless adequate spill control/containment is provided. These measures would retain pollutants on-site and reduce the downstream impacts of construction.

Longer-term mitigation of potential impacts for the proposed facilities and trail segments would include treatment of the runoff from developed areas to minimize pollutants from vehicles reaching the waterways. A qualified engineer within the administering agencies would conduct a soils and engineering evaluation to support the location and design of all septic system repairs, upgrades, and installations. The permanent mitigation measures would be planned and designed as part of the detailed design of the proposed facilities. Impacts after mitigation would be minor.

The proposed campgrounds or trail camps could result in moderate impacts to water resources by increasing pathogen levels in the waterways and posing a threat to aquatic and human health. Mitigation of these impacts would be through planning the location of the restroom facilities and associated septic systems to minimize the delivery of pathogens to surface water. Erosion control measures such as sediment retention basins, silt fencing, or slope stabilization techniques would be employed to reduce the erosion risks. Impacts to water resources from campground facilities would be reduced to minor after mitigation.

Another impact from the trail campsites and other developments would be the extraction of potable water. The source of drinking water for these camps would be considered carefully, because removing too much water may result in widespread and substantial degradation of water flow and habitat quality. Should such impacts occur, they would be considered moderate adverse impacts to the aquatic life in the stream. The availability of good quality drinking water might determine the feasible size of camps and would need to be considered carefully in the detailed design phase. Impacts could be reduced to minor with implementation of mitigation.

Cumulative Impacts

Cumulative impacts to water resources from the education alternative would be similar to those described for the preferred alternative

and would remain moderate, as identified in the listed project environmental documents in the appendix.

Conclusions

Overall, the education alternative would have a minor adverse impact on the water resources of the area, provided appropriate mitigation measures are employed and maintained. There might be some moderate beneficial effects of the educational proposal by reducing visitor numbers to parts of the recreation area, and by closing and restoring some tracks in the area.

The park's water resources would not be impaired by the actions proposed in this alternative.

Floodplains

Analysis

The major drainages/floodplains in the SMMNRA, as described in the Affected Environment chapter, include Calleguas and Malibu Creeks as well as the Arroyo Sequit stream in Leo Carrillo State Park. The education alternative proposes the following facilities and uses in the vicinity of these floodplains that either include modified/new structures or would increase the access to and extended duration of activities (especially over night) in the floodplains.

- Mugu Lagoon Visitor Education Center and CSUCI Research and Information Facility are located in the vicinity of the Calleguas Creek floodplain,
- Circle X Ranch Overnight Camp, Leo Carrillo State Park campground rehabilitation, the Solstice Canyon environmental education camp, the coastal education center at Leo Carrillo, the accessible trail in Liberty Canyon, and the Decker Canyon Accessible Overnight Education Center are in the vicinity of the Arroyo Sequit stream floodplain.
- Paramount Ranch, Peter Strauss Ranch Area, White Oak Farm, Gillette Ranch Joint Administration and Environmental Education Center, and the Malibu Bluffs visitor education center are in the vicinity of the Malibu Creek floodplain.

Additionally, this alternative includes areas designated as high intensity use that encompass the Calleguas and Malibu Creek floodplains as well at the Arroyo Sequit stream floodplain.

It is expected that the rehabilitation of the Leo Carrillo campground, which is in Arroyo Sequit Canyon, would entail naturalizing the stream and improved natural floodplain processes – natural flood cycles, habitat, depositions, scouring, etc. Capacity would be similar to what currently exists, so increased visitation would not be a factor. The stream tends to flood in the winter, which is the off-season for coastal camping, so visitation would likely be low at this time.

The specific location for the structures and use areas for facilities listed above has not been determined. The intensity or severity of potential impacts would ultimately depend on these locations. However, locating structures/extended use areas for one of the proposed facilities within the 100-year floodplain would result in long-term moderate adverse impacts because it would increase access to the floodplain and provide for the construction of facilities within the floodplain. These actions would increase the potential for loss of life or property through increased potential for flooding. Locating structures/ extended use areas for more than one facility in the 100-year floodplain would result in major long-term adverse impacts because the potential for flood damage would increase even further.

These impacts could be reduced through mitigation. During siting of structures and use areas for proposed facilities in the vicinity of a floodplain, an engineering evaluation would

be conducted by a qualified engineer to identify the boundaries of the 100-year floodplain. Unless infeasible, structures and use areas would be located outside the floodplain boundaries. Facilities and trails within the 100-year floodplain would be closed 24 hours prior to a predicted 50-year, 24-hour storm event. NPS would use various warning systems and would patrol use areas within the floodplain prior to and during storms to ensure that these areas are not occupied. For example, VCFCD has operated a flood warning system since February 1979. The system is called "ALERT", an acronym for Automated Local Evaluation in Real Time, which was developed by the National Weather Services. In addition, signs would be provided at the floodplain boundary on trails and access roads alerting park users that they are about to enter an area prone to flooding during wet weather conditions.

Cumulative Impacts

The education alternative would result in impacts to floodplains. However, review of environmental documentation for other ongoing or future development projects did not reveal potential for impacts to floodplains. Consequently, the education alternative would not result in cumulative impacts to floodplains.

Conclusions

The education alternative could result in potentially moderate adverse long-term impacts related to the above facilities and the designation of high intensity use that encompasses the Calleguas and Malibu Creeks and Arroyo Sequit stream floodplains. There could be moderate long-term impacts to floodplains related to the Leo Carrillo State Park campground rehabilitation. The mitigation measures discussed in the analysis of impacts section would reduce the adverse impacts related to floodplains to minor.

The park's floodplain resources would not be impaired by actions proposed under this alternative.

Biological Resources and Wetlands

Analysis

- **Vegetation**

  Direct and indirect adverse impacts on vegetation in the education alternative would involve 19 development sites. The specific biological resources affected by the development of projects within this alternative would be presented in separate NEPA/CEQA documentation prepared for each project, although some general consequences might include the impacts discussed in the following paragraphs and sections.

  The proposed facilities development and trail development would be placed on disturbed sites and, therefore, would have direct impacts only on previously modified (ruderal) vegetation, and presumably would not affect native vegetation. The new facilities would be concentrated primarily in the central and western portions of the recreation area, with a visitor contact site near the eastern boundary of SMMNRA. In placing these facilities at already disturbed sites, there may be small areas of temporary adverse impacts from these activities due to cut and fill, grading, fire zone, and paving requirements. The vegetation currently occupying the development sites would presumably be ruderal prior to implementation of the development plan, and, therefore, would not result in elimination of additional native vegetation. However, there may be small fringe areas of native vegetation around the disturbed site that would be removed during construction. These impacts would be very localized and located only on the edges of sensitive populations, and therefore of minor to

negligible intensity. Impacts on native vegetation from facility development in this alternative are similar to the no action alternative. With the rehabilitation of existing SMMNRA developments, effects on the acreage of native vegetation, in balance, should be beneficial.

Adverse impacts to native vegetation could also result from requirements of fire management zones around developed structures. Local land use agencies would enforce fire suppression zone requirements around visitor facilities that require the removal of natural vegetation in a wide fire suppression zone. For example, Los Angeles County ordinances require that a 200-foot suppression zone be established around any structures built under its jurisdiction. Visitor uses, albeit much of it children in school programs, would be greatly increased in this alternative in comparison with the no action alternative. An increase in unplanned fires resulting from higher visitor use would occur, and would pose an increased potential hazard to native vegetation, especially in the areas adjacent to the new development. Examples of impacts would be the removal (burning) of vegetation in backfire areas, or removal of vegetation in areas where temporary flow/erosion control structures would displace riparian vegetation during storms. During these emergency activities, the loss of habitat or individuals of sensitive plant and animal species may be unavoidable. These emergency actions could create negligible to major impacts, depending on the extent of sensitive species that would need to be replaced, as discussed above. However, during routine planning for fuel management and trail maintenance activities, adverse effects on sensitive vegetation would be avoided or mitigated to minor, depending on the extent of sensitive species that would need to be replaced, as described above.

The length of the scenic corridor roads in the SMMNRA would be considerably increased within the central and eastern portions of the recreation area. This would increase the risk of fire in healthy stands of native vegetation within Topanga Canyon, Malibu Canyon, Kanan Dume Road, Decker Road, and canyons leading into the Cheeseboro/Palo Comado areas. Impacts on native vegetation from fire management and facility development in this alternative would potentially be considerably greater than from the no action alternative due to the systematic increase and enhancement of visitor use in the SMMNRA. For biota living near roadways, the intensity of this impact could range from moderate to major because fires along these segments could penetrate core habitat areas that support populations of sensitive species, but this alternative could increase the likelihood of fires throughout the park.

Beneficial effects of the education alternative include rerouting and revegetating trails in or near sensitive resources and reconfiguring roads. This would reduce the intensity of impacts on rare, threatened, endangered, or otherwise sensitive species found in the SMMNRA. In balance with recreation area-related development, the amount of native vegetation in SMMNRA would likely increase as new facilities are rehabilitated.

About 80 percent of the SMMNRA area would be designated as a low intensity area where visitor access to sensitive resources would be neither facilitated nor encouraged. The low intensity areas would be generally surrounded by moderate intensity areas, which would act as buffers between the low intensity areas and the higher use areas. The buffering would be required at a much-reduced scale in comparison to the no action alternative because the number of visitors is expected to decrease, which in turn would obligate fewer buffers.

The primary mitigation for proposed facilities development is to avoid undisturbed

native vegetation through careful siting of facilities. New development would be sited in previously disturbed areas whenever possible, which would normally support stands of exotic vegetation, thereby avoiding or minimizing impacts on undisturbed native vegetation. All grading and construction plans would be submitted to the administering agencies for review prior to approval. Areas temporarily disturbed during construction would be recontoured and revegetated with appropriate native plant species. Appropriate fire-suppression zones would be maintained around developed structures.

Erosion control measures such as sedimentation basins, silt fencing or slope stabilization techniques would be implemented for surface-disturbing activities, such as construction or trail maintenance. Pre-project surveys would be conducted by a qualified biologist prior to project implementation in the appropriate season for listed plant species, as well as other species of federal or state concern (Table 13). These surveys would be used in site planning of facilities to avoid sensitive species. The administering agencies would consult with the USFWS and CDFG if any listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, ESA Section 7, or CWA Section 404/401 processes. Monitoring by a qualified biologist is required for surface-disturbing activities in, or in close proximity to, sensitive vegetative resources (e.g., wetlands, listed species habitat).

Best management practices would be implemented during construction. For example, if construction would occur during the rainy season, temporary sedimentation retention basins could be required on some projects. In addition, servicing of construction vehicles could be prohibited within 100 feet of riparian corridors, or disturbances of native vegetation or the root zones of oak trees could be avoided by staking construction staging areas. Such measures, and others as appropriate, would ensure that impacts on biological resources due to construction would be avoided, otherwise mitigated, or that any effects would be negligible.

Adverse impacts on vegetation from management activities, maintenance, and visitor use would be minimized or avoided altogether through careful planning. Visitor management and visitor education programs, which would be developed and presented in the NEPA/CEQA documentation for each project, would be effective in minimizing many potential impacts. Fire clearance zones would be incorporated into the planning of developments. Educational efforts, such as posting fire hazard signs and focusing on fire hazards in educational programs, should be effective in reducing the likelihood of visitor-caused fires and their resultant impacts. If vegetation is lost or disturbed from any activity, the area would be rehabilitated or revegetated with species from an appropriate native plant palette, or would be closed or relocated to less sensitive sites.

The scenic corridor routes in the education alternative are longer and more numerous than in the no action alternative, and a focus on posting fire hazard signs and providing fire hazard education in these areas would be appropriately increased in comparison with the no action alternative. Undergrounding utilities that could potentially cause accidental ignitions could offset other fire dangers.

The education alternative includes the provision of recommended boundary changes in the western, northcentral and northeastern portions. The northcentral additions, connecting with Cheeseboro/Palo Comado Canyons, would potentially provide significant additional protection to vegetation

in the linkages within both Los Angeles and Ventura Counties. The no action alternative does not include this provision. If these proposed boundary changes are implemented, the education alternative could potentially substantially increase the protection of vegetation along the northern and western boundaries of the SMMNRA, providing for additional linkages to other open spaces, and at minimum, for archipelago linkages to other habitat linkages to the north.

In general, mitigation measures would be effective in avoiding or minimizing loss of natural vegetation, and permanent loss in the preservation areas would be minor as result of the education alternative. In contrast to the no action alternative, there would likely be a net gain of native vegetation acreage as recommended boundary changes were implemented.

Because most lands within the SMMNRA would be designated for low intensity use, impacts on biological resources throughout the recreation area would be reduced to minor or negligible from levels expected in the no action alternative.

- **Wildlife**

Facilities and trail segment development would have direct, localized impacts on some wildlife species, especially those that are adapted to the use of disturbed habitats. Removal of such disturbed habitat would affect some wildlife, but such species would primarily be non-native. A few species of small mammals, birds, reptiles, and amphibians would be permanently or temporarily displaced during construction activities. Adjacent populations could be adversely affected as displaced wildlife attempt to inhabit off-site areas where other individuals are already established.

There is little potential for losses of habitat available for endangered, threatened, rare or sensitive species of wildlife in this alternative because all facilities would be in previously disturbed areas. Impacts on wildlife from facility and trail segment development in this alternative are similar to the no action alternative and would range from negligible to major. Minor impacts would occur if only a small, localized portion of the sensitive population is affected because such effects would not substantially alter the ability of the species to survive in the area. These impacts would increase to major intensities, however, as more widespread or higher proportions of the populations were affected, thereby affecting the ability of the species as a whole to thrive in the region. With the removal and rehabilitation of existing recreation area developments, effects on the acreage of habitat available for wildlife, in balance, should be beneficial.

Direct impacts include disturbance of soils supporting vegetation during facilities and trail segment development, trampling or removal of vegetation, and disturbance of wildlife activities and habitat around campgrounds, especially for species that are sensitive to the presence of humans. Indirect effects from visitor use would include disruption of wildlife activities for some species where the activities take place along trails. Species that are particularly sensitive to human activity near water sources, for example, might avoid water sources as a result of visitor activity. This would include many of the large mammal predators, such as mountain lions, bobcats, coyotes, and badgers. Because the acreage of low intensity use would be increased in this alternative, such interactions with larger wildlife should be less frequent compared to the no action alternative. Impacts from visitor use along major roadways and scenic corridors in the education alternative, however, would be considerably higher than in the no action alternative. Overall, these impacts could range from minor to major, depending on levels of visitor use and proximity to sensitive

resources. Minor impacts are expected in low intensity use areas and where disturbance is away from sensitive areas. Major impacts would occur in high intensity use areas where sensitive species are present.

Construction planning and monitoring by a qualified biologist in areas supporting sensitive wildlife would reduce or prevent some impacts. Pre-project surveys would be conducted prior to project implementation in the appropriate season for listed species, as well as other species of federal or state concern (see Table 14). A qualified staff member of the administering agency would review all grading and construction plans prior to approval. Using the information collected during pre-construction surveys, the administering agencies would consult with the USFWS and CDFG in the detailed planning phase of a project, if any listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, ESA Section 7, or CWA Section 404/401 processes.

Monitoring by a qualified biologist would likely be required for surface-disturbing activities in or in close proximity to, sensitive wildlife resources (e.g., listed species habitat). Best management practices would be implemented during construction. For example, if construction would occur during the rainy season, temporary sedimentation retention basins could be required on some projects to minimize sediment transport and protect aquatic life. In addition, servicing of construction vehicles could be prohibited within 100 feet of riparian corridors, or disturbances of native vegetation or the root zones of oak trees could be avoided by staking construction staging areas. Such measures, and others as appropriate, would ensure that impacts on biological resources due to construction would be avoided, otherwise mitigated, or that any effects would be negligible.

- **Habitat Connectivity**

  Implementation of the education alternative would enhance the existence and connectivity of undisturbed habitats in the SMMNRA by creating large expanses of open space, with a fairly continuous connection along the entire east/west axis of the recreation area, all designated as a low intensity area. About 80 percent of the SMMNRA would fall into this category. Areas of moderate intensity area designation would occur primarily along scenic corridors. The scenic corridor designation would be expanded into the interior of the low intensity areas, including Topanga Canyon Boulevard, Malibu Canyon Road, Kanan Dume Road, and Decker Road. This would increase the risk of fire in the eastern three-fourths of the SMMNRA, putting sensitive resources there at more risk. This risk would be of major intensity near roadways, and of moderate intensity in other areas, as discussed above under vegetation.

  The education alternative, which includes recommended boundary changes would increase the connectivity of habitats along the northern border of the current recreation area boundaries, from Hidden Valley, eastward to the Cheeseboro/Palo Comado Canyons area, and along the entire western edge of the current SMMNRA boundaries to Mugu Lagoon. One major habitat connection of regional importance connects the Santa Monica Mountains north through Simi Hills to the Santa Susanna and San Gabriel Mountains. Pending legislation will include upper Las Virgenes Canyon and Liberty Canyon in the SMMNRA boundary, which are vital portions of this wildlife corridor. Such large expanses of natural habitat would promote healthy populations of numerous wildlife species, including

sedentary species such as lizards, mice, rabbits, and insects, to name a few. It also would provide large areas and territories for use by larger, more mobile species, such as coyotes, gray foxes, passerine birds, and deer. This would be a moderate to major beneficial effect, as it enhances the ability of these species to increase their regional distribution, exchange genes, and therefore increase their viability as a species.

The proposed configuration of increasing low intensity use areas in the western portion of the SMMNRA could reduce impacts on specific wildlife species from human activities by perhaps one or more levels of intensity for many species. These reductions would be major to moderate, moderate to minor, minor to negligible, when compared to the no action alternative.

As with the no action alternative, the primary mitigation to offset impacts from new development would be to avoid sensitive habitats and habitat linkage areas through careful project siting. A qualified biologist within the administering agencies would evaluate all proposed actions for their effects on habitats and on habitat connectivity to avoid or mitigate further habitat fragmentation. New developments would be excluded from existing wildlife corridors, or minimized to the greatest extent practicable, to ensure the continued exchange of genes and individuals between wildlife populations within and adjacent to the SMMNRA. Degraded habitats within conserved linkage areas would be restored. The most effective means of maintaining habitat connectivity is through the maintenance of sufficiently wide (greater than 400 feet) habitat linkages between major blocks of habitat. Whenever possible, documented wildlife movement areas would be improved with the appropriate NEPA/CEQA documentation prepared for that project.

- **Wetlands**

Several of the proposed facilities included in the education alternative would be near wetland resources:

- ***The Mugu Lagoon Visitor Education Center*** – would be sited between PCH and the lagoon within an already disturbed upland site. This facility includes a perimeter boardwalk for visitor viewing of the lagoon and associated wildlife.
- ***The Circle X Ranch*** – includes a substantial riparian area located adjacent to existing developed areas and trails
- ***Leo Carrillo State Park campground*** – is in a major drainage and riparian area. The rehabilitation of this facility would be focused toward relocating selected campground activity areas away from riparian areas to allow for riparian habitat enhancement and restoration.
- ***Solstice Canyon*** – The environmental education day camp at Solstice Canyon would provide interpretation of the adjacent wetlands.
- ***Liberty Canyon*** – The accessible trail at Liberty Canyon would also interpret adjacent wetlands.
- ***Decker Canyon*** – would become an accessible overnight and day use environmental education center and camp.
- ***Corral Canyon*** – would have an overnight environmental education camp.
- ***Paramount Ranch*** – has a substantial riparian area that bisects it. Existing access through this riparian area would be maintained.

Impacts to wetland resources associated with this alternative are considered to be potentially minor to moderate and short-term. Facilities would be located near, but not within wetlands. Minor impacts would be

expected with uses adjacent to wetlands that have a slightly perceptible impact on wetland value or function but are localized or affect only edge habitats on non-sensitive species. The impacts under this alternative would be mostly associated with existing structures, sites already developed, or campsites and would be minimized by avoidance to the extent practical. Major impacts to wetland resources are not expected because impacts associated with facility construction would be localized and sited outside wetland boundaries.

Wetlands and riparian habitats are considered sensitive resources to be conserved and enhanced wherever practicable. A detailed wetland delineation in accordance with the Coastal Act's protocol would be conducted by a qualified biologist prior to site engineering so that this information could be used during the site design process.

New facility infrastructure (water, sewer, roads, trails) would avoid wetland resources where upland alignments are available. Upland buffers between wetlands and facilities would be provided wherever practicable. Where existing facilities require long-term maintenance or enhancement (e.g., Circle X Ranch), siting of infrastructure improvements would minimize impacts to wetland resources wherever practicable. Existing disturbed areas within the drainage reach associated with the facility would be utilized where avoidance of wetland impacts is not practicable. Opportunities to restore and enhance disturbed wetland resource areas adjacent to facilities would be identified during the site design process. Closure of selected roads and trails would provide opportunities for wetland restoration. Unavoidable impacts to wetland resources would be fully mitigated through the 404/401 and 1603 wetlands permitting process, which emphasizes avoidance and minimization of impacts prior to considering compensatory mitigation.

Cumulative Impacts

The minor adverse cumulative impacts of the education alternative would be similar to those described under the no action alternative. The education alternative would also have the benefits described in the preferred alternative, due to the large proportion of the SMMNRA that would be dedicated to low use intensity management areas.

Conclusions

Because most lands within the SMMNRA would be designated for low intensity use, impacts on biological resources and wetlands throughout the recreation area would be reduced from levels expected in the no action alternative but would still range from negligible to major, depending on the extent and sensitivity of species impacted. The increase in lands designated as low intensity areas would greatly reduce the risk of fires, and their resultant impacts in the moderate and low intensity areas.

Facilities and trail segment development would have direct, localized adverse impacts on some wildlife species, especially those that are adapted to use of disturbed habitats. There is little potential for decreases in the habitat available for endangered, threatened, rare or sensitive species of wildlife in this alternative. Impacts on wildlife from facility development in this alternative are negligible to minor, similar to the no action alternative. With the rehabilitation of existing recreation area developments, impacts on the acreage of habitat available for wildlife, in balance, should be beneficial. Visitor uses, such as horseback riding and mountain biking, would be mostly eliminated from low intensity areas in this alternative. This would be a moderate long-term beneficial effect on biological resources and wetlands.

Implementation of the education alternative would greatly enhance the existence and connectivity of undisturbed habitats in the SMMNRA. The scenic corridors would be expanded into the interior of the low intensity areas, including Topanga Canyon Boulevard, Malibu Canyon Road, Kanan Dume Road, and Decker Road. This expansion would increase the risk of fire in the eastern three fourths of the SMMNRA. The education alternative, which includes recommended boundary changes would increase the connectivity of habitats along the northern border of the current recreation area boundaries, from Hidden Valley, eastward to the Cheeseboro/Palo Comado Canyons area, and along the entire western edge of the current SMMNRA boundaries, including Mugu Lagoon. The mitigation measures discussed in the analysis of impacts section would reduce adverse impacts to biological resources and wetlands to minor.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national recreation area's establishing legislation, (2) key to the natural or cultural integrity or opportunities for enjoyment of the national recreation area, or (3) identified as a goal in this general management plan or other relevant NPS planning documents. Consequently, the NRA's biological resources and wetlands would not be impaired by actions proposed under this alternative.

Paleontological Resources

Analysis

Impacts to paleontologic resources would be much the same under the education alternative as under the preferred alternative. Most of the facilities would be placed in previously disturbed areas, effectively reducing the level of impacts. Enhancement of facilities associated with scenic corridors would result in direct moderate adverse impacts to paleontologic resources. Reconfiguring some recreation area-related developments and roads could also result in moderate adverse short-term impacts to the extent that undisturbed sediment of moderate to high paleontologic potential is affected. Limited disturbance of deposits with moderate to high paleontological potential would result in a perceptible impact that would be considered a moderate impact. Completion of the Backbone Trail would result in long-term adverse impacts to paleontologic resources by exposing to erosion sediments of high to moderate paleontologic sensitivity. Increased visitor use under this alternative would result in an increased frequency of unauthorized collection of paleontologic specimens, which constitutes a minor adverse impact because facilities and high use intensity areas would be likely to encompass only limited deposits with moderate to high paleontological potential.

As with other alternatives, mitigation of impacts to paleontologic resources would be achieved by recovering their scientific data potential and educational potential. A qualified paleontologist would determine the paleontologic sensitivity of affected sediments during the administering agency's geological and geotechnical review of grading and construction plans. If excavation were to occur in sediments that have high to moderate paleontologic sensitivity, monitoring by a qualified paleontologist would be required during excavation. If fossils were discovered, construction would be halted in the immediate vicinity of the find until they were removed in a scientifically controlled fashion by a qualified paleontologist. These measures would reduce impacts to a minor level. Public education implemented by the administering agency

addressing the scientific and educational importance of fossils, and promoting enhanced awareness of enforcement of California State and NPS non-collection policies, constitute additional mitigation of impacts to paleontologic resources.

The beneficial effects of the education alternative include a broader capability of the SMMNRA to educate the public regarding the scientific value of fossils, and of the geologic and ecological history of the Santa Monica Mountains.

Cumulative Impacts

Cumulative impacts of the education alternative would be localized and minor, similar to those described under the preferred alternative, and would remain minor as identified by the listed project documents in the appendix.

Conclusions

Moderate short-term impacts to paleontologic resources would be much the same under the education alternative as the preferred alternative. Most of the facilities would be placed in previously disturbed areas, effectively reducing the level of impacts. Enhancement of facilities associated with the scenic corridors would result in direct minor and moderate adverse impacts to paleontologic resources. The mitigation measures discussed in the analysis of impacts section are recommended for all alternatives and would reduce adverse impacts to minor.

The park's paleontological resources would not be impaired by actions proposed under this alternative.

CULTURAL RESOURCES

Analysis

The emphasis of component actions under the education alternative would be weighted toward the protection and restoration of important natural resource(s) through educational programs. Conflicts in the management of cultural and natural resources might result in impacts to cultural resources if, in the resolution of such conflicts, it was determined that the importance of protecting and rehabilitating natural resources superseded that of the cultural resources. Chapter 5 of the National Park Service's *Management Policies* (2001) permits the planning process to make this decision:

> *Achievement of other park purposes may sometimes conflict with and outweigh the value of cultural resource preservation. The planning process will be the vehicle for weighting conflicting objectives and deciding that a cultural resource should not be preserved. Following such a decision, significant resource data and materials will be retrieved.*

Impacts to cultural resources resulting from such decisions, however, would be mitigated to the fullest extent possible in accordance with the *Secretary of the Interior's Guidelines* and in conformance with Section 106 of the NHPA and appropriate requirements of CEQA. As a result, such impacts would be kept to negligible levels. Higher levels of visitation, stimulated by the SMMNRA's emphasis on enhanced environmental education and outreach programs, might render some of the recreation area's cultural resources more susceptible to degradation.

However, implementation of this alternative could significantly enhance the interpretive/educational components of the recreation area's cultural resource management program, which could increase public sensitivity to the importance of the resources and potentially limit impacts by instilling a greater understanding and appreciation of the resources. The development of stewardship programs

could limit the destructive effects of vandalism through increased public involvement and awareness. The SMMNRA's outreach policy, which includes conducting programs for schoolchildren, could be significantly expanded under this alternative, incorporating more information and values about cultural resources in the curriculum. This would help build an enlightened constituency that would benefit the recreation area and resource preservation in the future.

The acquisition of lands or interests in lands by SMMNRA would benefit cultural resources by extending the protection of federal ownership to those lands. Viewsheds that are potential components of cultural landscapes in those areas might also be afforded greater protection from incompatible development adjacent to SMMNRA boundaries. As a result, no impacts would occur through these actions. Administering agency staff would continue to work with neighboring landowners and jurisdictions to ensure, to the extent feasible, that adjacent land management practices would not impair the recreation area's cultural resources, viewsheds, or distant vistas.

- **Archeological Resources**

  Archeological resources would be protected from the effects of development and visitor use, where possible. However, sites would remain susceptible to natural deterioration, inadvertent damage by human activity, and vandalism in backcountry areas. Some sites would eventually be lost. Further deterioration or destruction of archeological sites in the recreation area by natural forces or human activity would result in the loss of resource values associated with the prehistory and history of the region. Such impacts are expected to be negligible because this alternative would not increase public accessibility to archeological sites in the SMMNRA. With appropriate mitigation, these impacts could be further reduced.

  Rerouting existing trails away from known archeological resources would afford such resources more protection from inadvertent damage by human activity and vandalism. Mandated compliance with Section 106 of the National Historic Preservation Act, and where applicable with CEQA, which require a program of inventory, evaluation, and assessment, would ensure that adequate consideration and protection are accorded to potential archeological resources. If archeological resources were discovered during construction activities, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and their significance assessed, and if necessary, appropriate mitigation undertaken. Such measures could include avoidance or data recovery.

  If human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered on federal lands, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed.

  Prior to construction, the area of potential effect (APE) for cultural resources would be defined, a record review conducted, and a pedestrian survey completed by a qualified state park or NPS archeologist. Mitigation measures, including avoidance or data recovery, would be proposed if resources are identified, and the SHPO would be afforded the opportunity to consult on measures for cultural resources protection and mitigation of adverse impacts. Monitoring by a qualified state park or NPS archeologist and a Native American Indian representative would accompany any ground disturbing construction. In the case of any unanticipated discoveries, all ground-disturbing activities in the vicinity would

be stopped until the significance of the find is determined.

Management plans would incorporate measures to reduce or eliminate indirect and direct impacts to cultural resources to negligible levels. Such measures might include restrictions on access, signs, visitor education, or data recovery.

The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*.

- **Historic Structures**

Implementation of the education alternative would not impact the three historic structures within the recreation area's boundaries that are listed on the National Register of Historic Places – the Adamson House, Looff's Hippodrome (on Santa Monica Pier), and the Will Rogers House. The existing management and use of the structures would remain unchanged, and existing levels of visitation are not expected to appreciably increase in these areas. Although visitor use to such structures would be limited, minor impacts resulting from continued visitation of the Adamson House, Looff's Hippodrome and the Will Rogers House might occur, due largely to wear-and-tear and routine maintenance activities. These impacts would be considered minor because they are localized and gradual. Management practices employed by the NPS agencies following the guidelines listed below, and including use of appropriate maintenance and repair materials and supplies, however, would minimize effects, keeping impacts at a negligible level.

To preserve and protect the many historic structures of SMMNRA that are either listed on or potentially eligible for listing on the National Register of Historic Places, all preservation and rehabilitation or preservation treatment efforts, as well as daily, cyclical, and seasonal maintenance, would continue to be conducted in accordance with the National Park Service's *Management Policies* (2001) and *Cultural Resource Management Guideline* (1996), and the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

Making historic structures accessible to the physically challenged, to comply with the Architectural Barriers Act of 1968 and the Rehabilitation Act of 1973, could result in the loss of historic fabric or the introduction of new visual and non-historic elements. For example, the doorways of buildings could require widening and ramps or the addition of wheel chair lifts to the exterior of buildings. These impacts would be considered moderate because they would potentially involve only a few components of sites with high data potential. To avoid impacts to the historic values of these structures, historic architectural studies and plans for modification would be developed to reduce damaging the historic integrity of structures and ensure the highest levels of compatibility possible. All plans would follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995), and would be reviewed by the SHPO and concerned preservation societies prior to implementation of any changes. These impacts would be kept to a minor level.

Actions undertaken to minimize erosion along historic roads and trails would be implemented in a manner that would preserve the integrity of these cultural resources. Such measures would include use of historic building materials or concealment of erosion control structures using historic landscape features, in keeping with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). As a result, such impacts would negligible.

- **Cultural Landscapes**

  Additional uses and developments might be introduced into some of the recreation area's cultural landscapes. The expansion and/or improvement of existing visitor centers and interpretive facilities, or construction of new structures, parking areas, trailheads and trails, and picnicking and camping sites, could impact the cultural landscapes of the SMMNRA by disrupting or destroying historic settings and other characteristics of integrity. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. The careful design of facility improvements, including consultation with qualified staff and Native American Indian groups, and the use of compatible materials in the construction of new facilities, interpretive waysides, or trails, would minimize impacts to cultural landscapes.

  Though potentially significant cultural landscapes would be protected and preserved, continued visitor use could result in increased erosion and vandalism, accelerating the degradation of landscape features and elements such as roads and trails, structures, fence rows, and orchards. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. However, the SMMNRA interpretive and educational programs would increase visitor appreciation of the resources and how they are preserved and managed, as well as provide an understanding of how to experience such resources without inadvertently damaging them.

  The designation of Mulholland Drive, Topanga Canyon Boulevard, Malibu Canyon Road, Kanan Dume Road, Decker Canyon Road, and the Pacific Coast Highway as scenic corridors would encourage public interest in the corridors and associated resources. Designation as either a heritage corridor or cultural landscape could foster increased awareness and recognition of these routes as historic resources. At the same time, such designations would also likely generate increased traffic, which could create major impacts that would include widespread and highly noticeable deterioration of setting, feeling, and other aspects of integrity. Through the assessments and consultations that would attend such a designation, additional mechanisms, incentives, and opportunities to protect the resource could be provided to reduce or eliminate these impacts. Such measures would include traffic volume control, parking control, and expanded transit options.

- **Ethnographic Resources**

  On-going consultation with concerned Native American Indian groups has incorporated ethnographic resource values into the planning process. Impacts to known ethnographic sites could therefore be avoided or, if avoidance is not possible, mitigated. Some sites, however, might remain susceptible to natural deterioration, inadvertent damage by human activity, and vandalism. These impacts would be considered moderate because they could potentially result in a perceptible degradation of a Native American site with moderate to high historic data potential. Such impacts, however, are expected to be negligible after mitigation.

  Supporting Native American Indian participation in the interpretation of ethnographic resources would continue to expand the interpretation of the ethnographic resources of the SMMNRA. Such actions would enhance the ability to protect and preserve ethnographic resources and continue the traditional cultural practices, as well as increase appreciation of traditional cultures.

- **Component Actions**

  Component actions that are incorporated under the education alternative are listed below, along with their potential impact on cultural resources and the mitigation measures that could minimize those impacts. In many instances, however, the presence or absence of cultural resources has not yet been ascertained. As a result, the intensity of impacts cannot be determined at this time.

1. ***Visitor use of the recreation area would be managed such that the intended use intensities of the land would be: low 80 percent, moderate 15 percent, high 5 percent.*** – The high percentage of land designated as low intensity use, and the low percentage designated for high intensity use, would increase the protection afforded to cultural resources by decreasing impacts associated with visitor activities compared to the no action alternative. No mitigation efforts for historic properties are necessitated by this component action. Devices used to limit visitor access would stress the protection of the natural and cultural resources of the recreation area. Inventory of federal lands under Section 110 of the NHPA would continue, while compliance with Section 106 of the NHPA, consisting of inventory, evaluation, and impact assessment, would be followed for all planned undertakings in these areas.

2. ***Nonhistoric trails are to be rerouted in the vicinity of sensitive areas to avoid those areas.*** – Rerouting of trails away from sensitive areas could increase the level of protection afforded to historic properties in those areas. However, other sensitive cultural resources might be revealed during trail construction and might be adversely affected by construction activities. These impacts could range from negligible to major, depending on the data potential of affected sites and visitor use intensity. The following mitigation measures are recommended:

   ✔ A qualified state park or NPS archeologist would conduct a cultural resources inventory, evaluation, and assessment program before all trail construction. If any resources are identified, mitigation measures such as avoidance or data recovery, would be implemented. Native American Indian groups would be consulted regarding appropriate mitigation of potential impacts to cultural landscapes and places of traditional or sacred significance. To the extent possible, the trail would be constructed to avoid or minimize impacts to the traditional values of such places. As a result, such impacts are expected to be negligible.

3. ***Parking would be gravel or on permeable surfaces wherever feasible.*** – To the extent that paved parking surfaces could seal and protect buried cultural resources, gravel or permeable-surface parking areas would afford less protection in the same area. Lack of protection under this action, however, would be negligible. The following mitigation measure is recommended:

   ✔ A cultural resources inventory, evaluation, and assessment program conducted by a qualified NPS or state park or NPS archeologist would precede all grading and construction. If resources are identified, such mitigation measures as avoidance or data recovery would be conducted.

4. ***The western escarpment of the Santa Monica Mountains would be studied for inclusion in the low intensity area in the recreation area boundary.*** – Inventory of cultural resources within newly acquired

land would be required in conformance with Section 110 of the NHPA. No mitigation efforts for cultural resources would be necessitated by this component action.

5. ***Boundary studies would also be done for the open space east of Hidden Valley, the area around the Las Virgenes Reservoir, Marvin Braude Mulholland Gateway Park, Ladyface, and Triunfo Canyon for inclusion in the recreation area as a moderate intensity areas.*** – Inclusion of these areas within the SMMNRA would increase the level of protection of cultural resources by bringing them into federal ownership, and the expanded area would act as a buffer for resources in the SMMNRA. Inventory of cultural resources within newly acquired land would be required in conformance with Section 110 of the NHPA. No mitigation efforts for cultural resources would be necessitated by this component action.

6. ***An environmental education center would be located at Rancho Sierra Vista to provide educational programs concerning contemporary and traditional Native American Indian culture and to interpret ranching history.*** – This area comprises a historic Chumash village and a cultural landscape. Without appropriate consultation, educational programs concerning Native American Indian lifeways might be seen as an infringement on traditional cultural values. Ground-disturbing activities or other construction necessary for the creation of the center might impact contributing elements of the cultural landscape, and/or buried cultural deposits, while increased visitation might result in effects from increased erosion, inadvertent damage, or vandalism. These impacts, however, are expected to be negligible due to the control over visitor activities at the site. The following mitigation measures are recommended:

✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions (e.g., new facilities, facility enhancements, campgrounds, etc.) that might affect cultural resources. The administering agencies would consult with concerned Native American Indian groups to assist in developing measures to ensure that this program is developed in a manner consistent with respect for Native American Indian beliefs, traditions, and other cultural values. A qualified state park or NPS archeologist would conduct a program of inventory, evaluation, and impact assessment prior to any ground disturbing activities. If resources are identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be conducted. New design should be compatible with existing facilities.

7. ***Circle X Ranch would become an overnight environmental education camp, with expanded facilities for group camping.*** – Circle X Ranch is near a historic Native American Indian settlement. Expansion might require land clearing and/or ground-disturbing construction activities that might impact archeological resources, while increased visitation might result in effects from increased erosion, inadvertent damage, or vandalism. Such impacts, however, are expected to be negligible because they would be localized and would be focused outside of the cultural site boundary. The following mitigation measures are recommended to ensure that impacts are kept to negligible levels:

✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions that might affect cultural resources.

✔ The administering agencies would consult with concerned Native American Indian groups to ensure that this program is developed in a manner consistent with respect for Native American Indian beliefs, traditions, and other cultural values.

✔ A qualified state park or NPS archeologist would conduct a program of inventory, evaluation, and impact assessment prior to any ground-disturbing activities. If resources are identified, a qualified state park or NPS archeologist would develop a program to mitigate impacts through avoidance, data recovery, access restriction, and visitor education.

8. ***Decker Canyon would become an accessible overnight and day use environmental education center and camp.*** – The Decker Homestead is a cultural landscape and significant archeological properties might be present in the vicinity. Construction and other ground-disturbing activities necessary for the creation of the center might impact contributing elements of the cultural landscape, and/or potential buried cultural deposits, while increased visitation might result in effects from increased erosion, inadvertent damage, or vandalism. The impact would be considered major because it would affect an entire site with high archeological data potential. To ensure that impacts are kept to minor or negligible levels, the following mitigation measures are recommended:

✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions that might affect cultural resources.

✔ The administering agencies would also consult with concerned Native American Indian groups to ensure that this program is developed in a manner consistent with respect for Native American Indian beliefs, traditions, and other cultural values.

✔ A qualified state park or NPS archeologist would conduct a program of inventory, evaluation, and impact assessment prior to any ground disturbing activities. If resources are identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be conducted.

9. ***The Peter Strauss Ranch would host small art exhibits, concerts, fund-raisers, and family events. Circulation and parking improvements would be necessary.*** – The Peter Strauss Ranch is a historic property and a cultural landscape. Construction and other ground-disturbing activities necessary for parking improvements might directly impact contributing elements of the cultural landscape, and/or potential buried cultural deposits, while increased visitation might result in indirect effects from increased erosion, inadvertent damage, or vandalism. These impacts, however, are expected to be negligible because they would remain localized and would affect only individual components of the site. The following mitigation measures are recommended:

✔ National Register of Historic Places nomination forms need to be completed

and the Peter Strauss Ranch listed on the national register. Proposed modifications need to be reviewed by a historical architect.

✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions that might affect cultural resources.

✔ A qualified state park or NPS archeologist and historical landscape architect would conduct a program of inventory, evaluation, and impact assessment prior to any ground disturbing activities. If resources are identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be implemented.

10. ***Paramount Ranch would include facilities for a film history education center. Parking and circulation would be improved.*** – Paramount Ranch is a historic property and has been determined a significant cultural landscape eligible for listing on the National Register of Historic Places. Any construction or reconstruction might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character of the property. The following mitigation measures are recommended:

    ✔ Complete the cultural landscape report.

    ✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures could include avoidance, data recovery through HABS/HAER documentation, reconstruction using historically appropriate materials, or similar measures in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

11. ***A northern gateway visitor center would be located at Highway 101 and Las Virgenes/Malibu Canyon Road.*** – The center would be located in an existing building just outside of the recreation area boundary. No historic properties would be impacted. No mitigation efforts for historic properties are necessary.

12. ***The White Oak Farm would offer exhibits interpreting early ranching in southern California.*** – The White Oak Farm is a historic property. Construction activities necessary for parking improvements might directly impact contributing elements of the cultural landscape, and/or potential buried cultural deposits, while increased visitation might result in indirect effects from increased erosion, inadvertent damage, or vandalism. These impacts, however, are expected to be negligible because they would remain localized and would affect only individual components of the site. The following mitigation measures are recommended:

    ✔ Recommend that CDPR evaluate for National Register eligibility.

    ✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to

the implementation of any of the proposed actions that might affect cultural resources.

✔ A qualified state park or NPS archeologist would conduct a program of inventory, evaluation, and impact assessment prior to any ground disturbing activities. If resources are identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be implemented.

13. ***The National Park Service and California State Parks would have a jointly operated administration and education center located at Gillette Ranch.*** – Gillette Ranch is a historic property located near a historic Native American Indian settlement. Any construction to accommodate this component action might cause the alteration, removal, or destruction of materials contributing to its historic significance. Depending on the nature and extent of new construction and the data potential of affected sites, resulting impacts to this property cold be moderate to major in intensity. It is likely, however, that joint management activity could also promote the more effective management of the cultural resources of the SMMNRA. The following mitigation measures are recommended:

✔ A cultural resources inventory, including subsurface exploration, would be completed by a qualified state park or NPS archeologist prior to the finalization of plans associated with this facility, to assess the potential to adversely impact archeological deposits in this area. If resources are identified, mitigation through avoidance or data recovery would be undertaken.

✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing activities. In the event that any unanticipated resources are encountered, all construction in the vicinity would be halted until the significance of the land is evaluated and an appropriate course of action developed. Concerned historic preservation groups would be consulted and their input incorporated into the management plan for this facility.

14. ***An overnight environmental education camp would be established at Corral Canyon.*** – Establishment of the camp might require land clearing and/or construction associated with facilities improvements. As a result, construction or other ground-disturbing activities necessary for parking improvements might impact cultural resources present in the area, while increased visitation might result in effects from increased erosion, inadvertent damage, or vandalism. Depending on the nature and extent of new construction and the data potential of affected sites, resulting impacts to this property cold be moderate to major in intensity. The following mitigation measures are recommended to ensure that impacts are kept to negligible levels:

✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions that might affect cultural resources.

✔ A qualified state park or NPS archeologist would conduct a program of inventory, evaluation, and impact assessment prior to any ground disturbing activities. If resources are

identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be implemented.

15. ***415 PCH (Marion Davies Home) would be rehabilitated and serve as an eastern gateway to the recreation area.*** – The Marion Davies home is a historic property. Any construction or reconstruction might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character of the property. The following mitigation measure is recommended:

    ✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of any property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures would include avoidance, data recovery through HABS/HAER documentation, reconstruction using historic materials, or similar measures in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (1995).

16. ***The Mugu Lagoon Visitor Education Center would be at the western end of the recreation area off of the Pacific Coast Highway.*** – The proposed site would be located in a previously disturbed area. A historic Native American Indian settlement of considerable cultural significance is in the vicinity, and unidentified components of this site might be present in the proposed site area. If intact but unidentified subsurface deposits are present, construction activities might impact them during the course of ground-disturbing activities. The impact would be considered major because it would affect an entire site with high archeological data potential. As a result, further development in the area would be of concern to Native American Indians. The following mitigation measures are recommended:

    ✔ A cultural resources inventory, including subsurface exploration, would be completed by a qualified state park or NPS archeologist prior to the finalization of plans associated with this facility, to assess the potential to adversely impact archeological deposits in this area. If resources are identified, mitigation through avoidance or data recovery would be undertaken.

    ✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would also accompany any ground-disturbing activities. In the event that any unanticipated resources are encountered, all construction in the vicinity would be halted until the significance of the land is evaluated and an appropriate course of action developed.

    ✔ To assist with visitor education, the Mugu Lagoon Visitor Education Center would include information on traditional lifeways and the significance of the settlement of Muwu to the cultural history of the area.

17. ***The campground at Leo Carrillo State Park would be rehabilitated to integrate the campground with natural riparian processes.*** – The rehabilitation of natural riparian processes could enhance the value of the area as a cultural landscape. However, historic properties might be directly impacted if rehabilitation involves subsurface disturbance. Such impacts, however, are expected to be negligible to

minor because of the low probability of such impacts affecting a site with high data potential. The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*. The following mitigation measure is recommended to ensure that impacts are kept to negligible levels:

✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures could include avoidance or data recovery.

18. ***Develop coastal education center at Leo Carrillo State Park to provide environmental education and visitor orientation*** – Construction activities might directly affect historic properties in the project area through disturbance of archeological sites, erosion or other means. These impacts could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if trails are sited through, or adjacent to, sites with high cultural potential. The following mitigation measures are recommended:

✔ A cultural resources inventory, evaluation, and impact assessment program would precede construction. If resources are identified, mitigation measures such as avoidance of data recovery would be implemented.

✔ Qualified state park or NPS archeologists and Native American Indian representatives would conduct monitoring of ground disturbance in the vicinity of known or suspected archeological resources. Should unknown resources be identified, a qualified state park or NPS archeologist would conduct data recovery in consultation with the SHPO.

19. ***A visitor center would be located at Malibu Bluffs.*** – Malibu Bluffs is an urban area and is in proximity to a historic Native American Indian settlement. A minimal potential exists that construction-related ground disturbance might impact possible intact subsurface cultural deposits. Because of the minimal potential for affecting previously undisturbed archeological deposits with high data potential, these impacts would be considered minor. The following mitigation measures are recommended:

✔ Prior to the implementation of construction, the area of potential effect (APE) for cultural resources would be defined, a record review conducted, and a qualified state park or NPS archeologist would conduct a pedestrian survey of any exposed ground. Mitigation measures, including avoidance or data recovery, would be proposed if resources are identified, and the SHPO would be afforded the opportunity to consult on measures for cultural resources protection and mitigation of adverse impacts.

✔ Monitoring by a qualified archaeologist and a Native American Indian would accompany any ground-disturbing construction. In the case of any unanticipated discoveries, all ground-disturbing activities in the vicinity would be stopped until the significance of the find is determined.

20. ***The educational day camp program at the William O. Douglas outdoor education center in Franklin Canyon would be expanded.*** – If this expansion involves no subsurface disturbance to enlarge or improve facilities, no impacts to cultural resources are anticipated. However, Franklin Canyon is a cultural landscape, and a historic Native American Indian settlement has been reported in the vicinity. Should expansion require land clearing and/or ground disturbance, those activities could moderately impact elements of integrity contributing to the significance of the cultural landscape and/or effect historic properties such as the reported settlement. The following mitigation measures are recommended:

    ✔ A cultural resources inventory, including subsurface exploration, would be completed by a qualified state park or NPS archeologist prior to the finalization of plans associated with this facility, to assess the potential to adversely impact archeological deposits in this area. If resources are identified, mitigation through avoidance or data recovery would be undertaken.

    ✔ Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing activities. In the event that unidentified resources are discovered, construction would be halted until the significance of the find is evaluated. Cultural landscapes would be assessed and evaluated by a historical landscape architect or landscape historian. Concerned historic preservation groups would be consulted and their input incorporated into the management plan for this facility.

21. ***Mulholland Drive, Topanga Canyon Boulevard, Pacific Coast Highway, Malibu Canyon Road, Kanan Dume Road, and Decker Canyon Road would be designated as scenic corridors.*** – Road and parking area improvements might be necessary and the construction activities associated with these actions could affect cultural resources. Designation as scenic corridors would also likely generate increased traffic, which could create impacts such as deterioration of setting, feeling, and other aspects of integrity. These impacts are expected to be negligible due to the existing disturbed character of the area and the limited additional access that would occur to undisturbed cultural sites. The following mitigation measure is recommended:

    ✔ All road improvements would be preceded by a cultural resources investigation conducted by a qualified state park or NPS archeologist, inclusive of inventory, evaluation, and impact assessment, followed by mitigation if resources are identified. Such measures would include avoidance or data recovery. The documentation that would accompany designation would provide information that could be integrated into the management of this resource. Through the assessments and consultations that would attend such a designation, additional mechanisms, incentives, and opportunities to protect the resource from indirect impacts could be provided to reduce or eliminate these impacts. Such measures would include traffic volume control, parking control, and expanded transit options. As a result, impacts are expected to be negligible.

22. ***Simi Hills would be managed as a historic ranching landscape.***

    ✔ All road and trail improvements would be preceded by a cultural resources investigation conducted by a

qualified historical landscape architect or archeologist, inclusive of inventory, evaluation, and impact assessment, followed by mitigation, if necessary. Such measures would include avoidance or data recovery. The documentation that would accompany designation would provide information that could be integrated into the management of this resource. This potentially significant cultural landscape needs to be evaluated for listing on the National Register. Through the assessments and consultations that would attend such a designation, additional mechanisms, incentives, and opportunities to protect the resource from indirect impacts could be provided to reduce or eliminate these impacts. Such measures would include traffic volume control, parking control, and expanded transit options. As a result, impacts are expected to be negligible.

23. ***The Backbone Trail would be completed and portions of the trail in sensitive areas might be rerouted to avoid those areas, or to minimize the length of crossing across the sensitive area.*** – Trail construction might adversely affect nearby archeological sites, historic properties and the cultural landscape, either through ground disturbance caused by trail construction, or through increased erosion, access, or vandalism could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if trails are sited through, or adjacent to, sites with high cultural potential. Rerouting of trails away from sensitive areas would increase the protection and preservation of cultural resources within those areas. The following mitigation measure is recommended:

    ✔ A cultural resource inventory, evaluation, and impact assessment program conducted by a qualified state park or NPS archeologist, historical landscape architect, or landscape historian would precede all ground-disturbing activities. If any resources are identified, mitigation measures, including avoidance or data recovery, would be developed and implemented. Concerned Native American Indian groups would be consulted regarding potential impact to cultural landscapes of traditional significance and would assist in developing appropriate mitigation measures.

24. ***Rehabilitate the Morrison House to reflect the ranching period.*** – The Morrison House is a historic structure and may be eligible for listing in the National Register of Historic Places. Any construction or rehabilitation or preservation treatment might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character of the property. The following mitigation measure is recommended:

    ✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures could include avoidance, data recovery through Historic American Buildings Survey/Historic American Engineering

Record (HABS/HAER) documentation, reconstruction using historically appropriate materials and prepared by an historical landscape architect in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). As a result, impacts would be expected to be negligible to minor.

25. ***Watersheds and coastal resources would be protected and preserved through management practices and improvements.*** – Watershed improvements such as construction or revegetation activities might impact any historic properties present in these project areas if ground-disturbing activities take place on or near archeological sites, or these activities result in erosion of archeological deposits. The impacts would range from minor to major depending on the extent and depth of erosion, as well as the presence of significant cultural resources. The following mitigation measure is recommended:

    ✔ All construction or revegetation projects involving ground disturbance would be preceded by a cultural resource inventory, evaluation, and impact assessment program. If necessary, mitigation measures, including avoidance or data recovery, would be developed and implemented. As a result, impacts could be kept to negligible levels.

26. ***Establishment of an archeological district*** – Establishment would have beneficial effects on archeological resources. Listing of the district on the National Register of Historic Places would provide increased regulatory protection to archeological resources from proposed development projects in the area. In addition, resource data collected for the district via testing would provide educational benefits to visitors that could serve to heighten the awareness and appreciation of visitors for archeological resources, thereby contributing to their protection over the long term.

27. ***Designation as an archeological district*** – Designation would also provide increased status and visibility to the district's resources. This could be a beneficial impact in that district resources would be less likely to be overlooked in situations of threatening development. Increased visibility may also lead to adverse impacts by attracting pot-hunters or collectors to the area, resulting in greater potential for disturbance, loss, or destruction of archeological resources. However, with implementation of typical park law enforcement techniques, adverse effects due to collectors are anticipated to be minor. In addition, increased visibility might result in wear and tear because staff might want to interpret the site.

Cumulative Impacts

As described under the no action alternative, a number of other past, present, and foreseeable future projects have potential for adverse impacts to cultural resources in the area. Environmental documents for these projects indicate that with implementation of mitigation measures, cumulative impacts on cultural resources from these projects would be less than significant. Under the education alternative, adverse impacts from visitor use and facility and trail segment development could add incrementally to impacts from other actions in the area. However, with implementation of mitigation measures, adverse impacts to cultural resources would be reduced to minor for this alternative. Consequently, impacts from the other actions in combination with impacts of the education

alternative would result in minor cumulative impacts.

Conclusions

The education alternative offers a fairly high level of protection to cultural resources, providing for a designation of 80 percent of lands as low intensity, 15 percent as moderate intensity, and 5 percent as high intensity. The overall long-term potential for cultural resources to be at risk by project impacts and required mitigation would be somewhat less than at the present level, given the high percentage of lands designated for low intensity use. However, negligible to major adverse impacts from component actions would likely occur. These adverse impacts would be reduced to negligible levels with the implementation of mitigation discussed in the analysis of impacts section.

The park's cultural resources would not be impaired by actions proposed under this alternative.

VISITOR EXPERIENCE

Analysis

Under the education alternative, visitor experiences generally would reflect experiences described under the preferred alternative. Visitor use would increase in the vicinity of new facilities. Increased traffic, crowding, and noise would have moderate adverse impacts to visitors that prefer quiet and solitude. These moderate impacts could be reduced to minor by guiding visitors to high use areas and encouraging visitor use during less busy times. However, educational experiences available to visitors would be greatly enhanced under this alternative, which would have a moderate beneficial effect on visitor experience.

At Solstice Canyon, Morrison Ranch House, Mugu Lagoon visitor education center, Paramount Ranch film history education center, the Rancho Sierra Vista environmental education center, the northern gateway visitor center, White Oak Farm, Gillette Ranch, Malibu Bluffs visitor education center, 415 PCH (Davies Home), and Leo Carrillo coastal education center visitors to the SMMNRA would have opportunities to learn about natural and cultural resource issues and sustainable use of park resources; they would have the same opportunities during overnight camping excursions to the park at Circle X Ranch, Decker Ranch, and Corral Canyon.

Other visitor opportunities unique to this alternative include a large-screen theatre and visitor orientation center in the vicinity of Highway 101 and Las Virgenes/Malibu Canyon Road, and management and interpretation of Simi Hills as a historic ranching landscape. This increase in educational programs would provide more destinations for visitors to the recreation area, and more opportunities to learn about the park resources. This would allow a better understanding of the significance of SMMNRA, increase enjoyment of the park, provide more than a recreational experience, and increase the protection of park resources.

Rather than a tour shuttle as in the preferred and preservation alternatives, audio tours would be created for touring Mulholland Highway, Topanga Canyon Boulevard, PCH, Malibu Canyon Road, Kanan Road and Decker Canyon Road. Audio tours would possibly provide a minor beneficial effect for those who prefer their own vehicle. However the distractions of traffic and curvy roads would detract from the visitor experience and would be considered a moderate impact. This impact could be reduced to minor by limiting opportunities for parking outside of designated parking areas and providing adequate parking at, or alternative transportation to, high intensity use areas.

Visitor experiences in low intensity areas under this alternative would reflect similar major beneficial effects as those described under the preferred and the preservation alternatives. Restrictions on uses of areas currently managed for moderate intensity use may have moderate adverse impacts on visitors that enjoy multi-use trails and camping. Impacts could be reduced to minor by improving existing trails, and creating new trails and camping areas in remaining moderate intensity use areas.

Cumulative Impacts

Though review of available environmental analysis documents for the current and planned projects described in the cumulative impacts methodology section did not identify significant cumulative impacts to visitor experience that would result from these projects, these projects would increase development, human presence, and residential areas adjacent to and within the SMMNRA. Cumulative impacts of the education alternative are similar to those described for the preferred alternative except that the emphasis on education would increase public awareness of the fragile nature of the Santa Monica Mountains. Visitors would have additional opportunities to learn about SMMNRA resources that would lead to increased visitor understanding and enjoyment of the recreation area. Adverse cumulative impacts would be moderate.

Conclusions

There would be more destinations for learning about park resources for the visitor in the education alternative. Also, this alternative would offer camping for groups in the park at designated educational facilities. For school groups and some visitors, all the new educational opportunities would positively affect their experience. Approximately 80 percent of the park would be managed as a low intensity area. Mitigation measures for reducing impacts related to increased visitor use and restricting activities in areas previously dedicated to moderate intensity uses would reduce adverse impacts to minor and are discussed in the analysis of impacts section.

LAND USE AND SOCIOECONOMIC ENVIRONMENT

Land Use

Analysis

The education alternative would redirect NPS services and facilities toward environmental education, appealing to the general public and school systems. The majority of proposed facilities would serve an educational purpose. Overnight educational camps would be available to groups. Existing trails would be maintained or rerouted to avoid sensitive habitat areas. In such cases, the abandoned trail would be restored to its natural condition. Parking facilities in support of recreational facilities would be installed, using gravel or compacted soil wherever feasible. Overall, 80 percent of land within the SMMNRA would be designated under a low intensity management approach, while only 5 percent would be maintained under a high intensity management approach, as illustrated in Figure 8 – Education Alternative.

The education alternative is similar to both the preferred and preservation alternatives, with slight shifts from low to moderate intensity management areas concentrated around the Charmlee Natural Area and west of Topanga Canyon Road, just south of Mulholland Drive. Because both low and moderate management areas are inconsistent with residentially designated land uses and result in similar land use impacts, impacts in low and moderate use intensity management areas under the education alternative would be similar to those described in the impact analysis for the

preferred alternative. In some areas adjacent to low density residential development, shifts from low to moderate management areas under the education alternative may reduce some previously major impacts to moderate. However, because the ultimate density of development is difficult to project in these areas, these reductions in impacts cannot be concluded with certainty.

The land use inconsistencies between locally designated residential areas and adjacent low and moderate use intensity management areas could be partially mitigated by close coordination between NPS and local jurisdictions during land development policy and plan amendment processes to increase the consistency of land use management approaches.

High use intensity management areas would occupy five percent of the total SMMNRA area under the education alternative, but would be distributed throughout the SMMNRA differently than under the preferred and preservation alternatives. The impacts analysis discussion under those alternatives applies to the education alternative. Each of the facilities would be located adjacent to either designated residential or open space areas and the total high intensity use area within the SMMNRA is similar. High intensity management areas under the education alternative would be surrounded by both designated open space and residential land, as described under the no action alternative. As discussed in the no action alternative impact analysis, high intensity management areas are inconsistent with residential development, and where bordering each other would result in moderate to major impacts, depending on the type of facility or use and the surrounding residential development density.

Negligible to minor impacts would occur in high use management areas that are adjacent to locally designated open space depending on the focus of the open space area for urban recreation or resource protection. Negligible impacts would result from high use management areas if an adjacent open space area has the primary goal of urban recreation because such uses/facilities would not substantially detract from the existing use of the area. More substantial impact could be expected if an open space area is dedicated to resource protection, however, because additional development and/or use nearby could diminish the role of the open space in protecting natural resources. However, these impacts would be minor since the high use intensity designation and facility development would only occur on already disturbed or highly used sites, or at the perimeter of the parkland, and would therefore not greatly decrease the value of the open space. In addition, high use intensity areas are not located adjacent to any locally designated habitat preservation areas, which minimizes the potential for impact to protected natural resources due to visitor use in high intensity areas or facilities.

Activity within the SMMNRA would also be controlled, and would likely afford a higher level of protection than areas under local control. While all of the areas described under the preferred alternative, except the Las Virgenes Canyon site, would be inconsistent with adjacent open space designations under the education alternative, the Charmlee Natural Areas would also be considered inconsistent under the education alternative. These impacts would be partially mitigated through the design of access within high use intensity management areas to direct visitor use away from areas primarily designated for resource protection.

Boundary studies proposed under the education alternative would include some of those previously discussed under the preferred and preservation alternatives. A number of the boundary studies proposed under the preferred alternative would be

evaluated and included in the education alternative, including the expansion of the SMMNRA boundary to the west toward CSUCI, the open space east of Hidden Valley, Ladyface Mountain and Triunfo Canyon, the area around Las Virgenes Reservoir, and the area north of the Marvin Braude Mulholland Gateway Park. The impacts associated with the boundary studies described in the preferred alternative impact analysis would also potentially occur with implementation of the education alternative. An additional boundary study, which would extend the SMMNRA around Stone Canyon in the city of Los Angeles, is also proposed under the education alternative. Impacts associated with the potential expansion are included in the impact analysis discussion for the preservation alternative.

Cumulative Impacts

Cumulative impacts are similar to those described under the no action alternative and would remain major. Although the education alternative proposes a number of additional park facilities, they would be located in disturbed areas and would not contribute to appreciably to the overall development of the region.

Conclusions

The education alternative is similar to the preferred and preservation alternatives, with slight shifts of low use intensity management areas to moderate use intensity zones. Many of the same impacts associated with the preferred and preservation alternatives would also be expected under the education alternative, since the NPS designated management areas are only slightly different under each alternative. The extent of the impacts would vary slightly, with greater areas of inconsistency between moderate use management areas and adjacent residential designations and correspondingly less areas with inconsistencies between low use intensity management areas and adjacent locally designated residential land. Moderate to major impacts associated with inconsistencies between designated residential and open space and adjacent low, moderate, and high use intensity management areas would occur.

Potential impacts associated with boundary studies under the education alternative would be similar to those identified with the preferred alternative. Potential inconsistencies in locally designated land uses compared to NPS prescribed management areas would be potentially major relative to the no action alternative.

In general, while the general land use impacts would remain similar to those described under the preferred and preservation alternatives, slight shifts in moderate to major impacts would be expected under the education alternative due to the difference in area dedicated to low use intensity management.

Mitigation measures discussed in the analysis of impacts section would limit the expected impacts associated with the education alternative.

Population, Housing and Employment

Analysis

The education alternative is reviewed in light of population, housing, and employment projections for Ventura and Los Angeles Counties. The projections are based on the Southern California Association of Governments' *Regional Comprehensive Plan*. The regional growth forecasts were disaggregated to counties, subregions, cities and small geographic areas. The model used to produce small area forecasts allocates growth to different areas based on their relative attractiveness. These forecasts were reviewed by local planning agencies (i.e., cities and counties) for consistency with zoning and local growth constraints such as

topography, and adjusted to represent the best estimate of future growth. The adjusted forecasts are used as the basis for review of each alternative, including the education alternative.

The general plans for each participating local planning agency identified the steep terrain of the Santa Monica Mountains as potentially undevelopable and often designated such land "open space" or, in some cases, the lowest residential density. Growth and development opportunities lie in the flat lands where vehicular access and public services are amply provided or easily extended. Accordingly, local planning agencies use general plan policy and zoning regulations to discourage future residential, commercial, industrial and institutional development on terrain with physical constraints and natural resource value, a growth management approach reflected in the adjusted, published forecasts. The number of jobs created to staff new facilities would be small within the SMMNRA or surrounding region relative to the number of jobs in the region. Negligible impacts to population, housing, or employment would be expected because the number of jobs that would result from this alternative would not result in a detectable change to the employment opportunities in the region. For these reasons, selection of the education alternative is not likely to alter local and regional population, housing and employment growth forecasts.

Cumulative Impacts

Similar to the no action alternative, no cumulative impacts on population, housing, or employment would be anticipated with implementation of the education alternative.

Conclusions

This alternative would not result in a change in population or housing within the SMMNRA or surrounding region. The number of jobs created to staff new facilities would be minimal within the SMMNRA or surrounding region. No mitigation measures are required.

Transportation

Analysis

- **Regional and Local Highway Network**

  In the education alternative several corridors, in addition to Mulholland Highway and Mulholland Drive, would be designated as scenic corridors. These corridors would include PCH, Decker Road, Encinal Canyon Road, Kanan Dume Road, Kanan Road, Malibu Canyon Road, Las Virgenes Road, and Topanga Canyon Boulevard. Applying the scenic corridor designation to these corridors would not cause any significant increases in traffic volumes on any of the major corridors within the study area.

  All of the roads within and near the SMMNRA would continue to provide for visitor access. Commuter traffic patterns would not change as a result of actions taken in this alternative. Traffic volumes and the level of service provided by the roads in the SMMNRA would be similar to the no action alternative.

  The actions taken as part of this alternative would not produce any regionally significant traffic impacts. The significant traffic impacts occurring as a result of this alternative would be localized around the proposed education facilities. The education facilities and their related traffic impacts are described in Table 26.

  Under this alternative the NPS would continue the policy of encouraging and supporting the removal of street lighting and power poles from the scenic corridors within SMMNRA.

- **Public Transit**

  A tour shuttle system would connect major points of interest in the SMMNRA. Visitors

Table 26

EDUCATION ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
Mugu Lagoon Visitor Education Center	The proposed facility would not generate any measurable amount of new vehicle trips, although it would generate several new bus trips per day. The proposed facility would have direct access from PCH including designated left and right turn lanes. A minor amount of traffic congestion would be created by traffic turning into and out of the site.
CSUCI Research and Information Facility	This facility on the outskirts of the SMMNRA would increase the volume of traffic on West Potrero and Potrero Roads and would increase the amount of traffic congestion at the major intersections along these corridors.
Rancho Sierra Vista/Satwiwa	This education day camp would be adaptively reused as an environmental/contemporary Native American culture education day camp. The expansion of this facility would generate a minor amount of new vehicle and bus trips into the area on days when major activities are scheduled. This action would result in a minor increase in traffic on Potrero.
Expand Circle X Education Camp	Expansion of the camp would result in a minor number of new vehicle trips in this portion of the SMMNRA including one or two new bus trips. This expansion would create a negligible increase in traffic volumes on Little Sycamore Canyon Road, and Yerba Buena Road.
Redesign Leo Carrillo Campground	This action would not generate any new vehicle trips and would change the exiting traffic patterns in the area.
Decker Canyon Accessible Overnight Education Center	Creation of this new facility would generate a minor amount of new vehicle trips per day into the area on days when programs are occurring. This would result in a negligible increase in traffic volumes on Decker Road, the western portion of Mulholland Highway, and Westlake Boulevard.
Peter Strauss Ranch Event Area	This action would create a minimal increase in traffic on the central portion of Mulholland Highway and some minor traffic congestion resulting from vehicle turning into and out of the site. The sight distance at the site entrance would be improved as part of the proposed improvements.
Paramount Ranch Film History Education Center	The proposed facility improvements would increase the number of visitors who stop at this location and create a minor increase in the traffic volume on Troutdale Road and the central portion of Mulholland Highway. It would also increase the amount of turning movements at the Troutdale/Mulholland intersection. It is estimated that this improved facility would generate about 100 new vehicle trips per day to this site including up to six buses. This increase in traffic would not change the Level of Service provided at the Troutdale/Mulholland intersection.
Corral Canyon Overnight Education Camp	This new facility would result in the development of a new access from PCH. As part of the access development the sight distance near the entrance would be improved and both left and right turn lanes would be added to PCH. The new facility would generate a minor amount of new vehicle trips into the area during the summer and on weekends, including one or two bus trips per day. This development would result in a negligible increase in traffic volumes on PCH. It would also create turning movements on PCH at the entrances. This new facility would create minimal traffic impacts in the vicinity of the site access on PCH.

(cont'd) **Table 26**

EDUCATION ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
White Oak Farm History Museum	This new facility would generate a negligible amount of new traffic into the area including one or two bus trips per day. This action would not create any measurable traffic congestion or impacts.
Gillette Ranch Joint Administrative and Environmental Education Center	This new facility would be developed on the Soka University site, which is on the south side of Mulholland just east of Las Virgenes Road. The administrative functions (and the related traffic) that currently occur at the State Park District Headquarters, located one half mile south of the proposed site, would be relocated to the Soka site. The NPS Headquarters and Visitor Center currently located in Thousand Oaks would also be relocated to the Soka site. This action would create a redistribution of the administrative trips that currently occur at the State Park and NPS headquarters. All of the NPS administrative trips that occur in the Thousand Oaks area would now occur on the roads leading to the Soka Site. The redistribution of the State Park administrative trips would not dramatically change the traffic patterns in the area. The new Education Center would generate a minimal amount of new trips into the area including several bus trips per day. The net result of this action would be a minor increase in traffic volumes on Las Virgenes and Malibu Canyon Roads, and a moderate increase in traffic on a short segment of Mulholland between the intersection of Las Virgenes and the entrance to the Soka site. There would be an increase in the turning movements at the Las Virgenes/Mulholland intersection. This change would not result in a change in the Level of Service provided by the intersection. The traffic changes would not create any notable traffic congestion. The change would eliminate the turning movements that currently occur on Malibu Canyon Road at the existing State Park Headquarters site thereby reducing traffic congestion in that area.
Northern Gateway Visitor Center	This new facility would consist of a visitor center, a large screen theater and a Park & Ride lot for commuters using the L.A. Metro Bus system that operates along U.S. Highway 101. This action would create a moderate increase in traffic on Agoura Road between the site and Las Virgenes Road. It would also increase the turning movements at the signalized intersection of Agoura and Las Virgenes Roads. This new facility would not change the Level of Service provided by this intersection. This facility would not create any traffic congestion problems or notable traffic impacts.
Malibu Bluffs Visitor Education Center	The creation of this new education center would create a small number of new trips into the area resulting in a negligible increase in traffic volumes on PCH. It is likely that this center would generate new school bus and tour bus activity in the range of four to six buses per day. Activity at the new center would increase the turning movements at the signalized intersection of Malibu Canyon Road and PCH. These increases would not be great enough to change the Level of Service provided by this intersection.

(cont'd) **Table 26**

EDUCATION ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
New Visitor Contact Site at the Marion Davis Home	This new facility would have a new parking area that would accommodate regular passenger vehicles and several buses. The presence of this new facility would not create any new trips into the area, although it would generate turning movements at the access location on PCH. Pacific Coast Highway consists of six travel lanes and a center turn lane in the vicinity of the proposed site. As part of this action the center turn lane would be converted into a designated left turn lave for vehicles entering the facility. Vehicles turning into and out of this new facility would create additional traffic congestion on PCH in the vicinity of the site.
Franklin Canyon Day Camp Program	This action would involve expanding the facilities and programs at the existing camp. This would result in one or two additional bus trips into the area per day during times when the camp is active. This would create a negligible increase in traffic on Franklin Canyon Drive and portions of Mulholland Drives. The overall traffic impacts would be negligible.
Expand Boundary to Griffith Park, consolidate visitor center with an existing facility, and include Stone Canyon Reservoirs	This action would not create any measurable change in traffic patterns or volumes.
Morrison Ranch House and Cultural Landscape Restored	This proposed facility would not generate any direct traffic impacts because the proposed ranch house restoration and its cultural landscape would not be accessible to visitors by vehicle. The facility would be accessible via a pedestrian trail from the Cheeseboro Canyon/Palo Comado Canyon trailhead. A minimal amount of additional traffic might be generat ed at the Cheeseboro trailhead parking facility (see the analysis below for improvements at Cheeseboro).
Environmental Education Day Camp at Solstice Canyon	This proposed program would not generate any measurable traffic impact. It is envisioned that students would arrive via bus and that the program would occur seasonally, perhaps one day a week or less. Thus, the program would generate only a handful of trips per week at most. Park facility improvements to be constructed during 2002 will greatly enhance vehicular circulation, accommodate school buses, and increase the amount of visitor parking at Solstice Canyon.-
Backbone Trail Completion	Completion of the remaining 5 miles of the 60-mile Backbone Trail and related campsites would not have measurable traffic impacts. Vehicular access will continue to be provided at a number of existing facilities, and the remaining segment of the trail that is to be completed does not intersect any major roadways. The trail does cross Yerba Buena Road in the general vicinity of the existing Backbone Trail, Mishe Mokwa, and Circle X trailhead parking lots. These facilities would continue to be at or near capacity on weekend days when seasonal temperatures are cooler.

(cont'd) **Table 26**

EDUCATION ALTERNATIVE – TRAFFIC IMPACTS

Leo Carrillo Visitor Education Center	This facility would create only minor impacts and good levels of service would be maintained. Access to the site is provided via the Pacific Coast Highway, which provides two travel lanes in each direction and a center turn lane at this location. Traffic volumes of less than 12,000 vehicles per day along this portion of the PCH are only a fraction of the volumes experienced east of Malibu Canyon Road. During project design, a dedicated westbound left turn lane would most likely be created with new road striping. A right turn deceleration lane would also be considered. A dedicated westbound left turn lane would most likely be created pending a site plan.
Expansion of Cheeseboro Trailhead and Liberty Canyon Accessible Trail	This project would alleviate current parking shortages and off-site parking impacts by adding substantial parking. Subject to development of a specific plan, parking would likely increase from roughly 70 to 110 parking spaces plus 10 parking spaces for vehicles with horse trailers. Minor increases in traffic volume on Cheeseboro Road, a dead-end street serving residential and park uses, would be attributable to the additional parking. These projected increases and their impacts have been analyzed by Los Angeles County staff in consultation with the affected community. The impacts were determined to be acceptable and manageable.
Mission Canyon Trailhead Development	This project would not have a significant impact on traffic volumes on Sepulveda Boulevard, a high-volume arterial street that serves as an alternate to Interstate 405. The site has ample parking and access improvements at the point of ingress would be considered as part of the reclamation and reuse of this former landfill site.
Temescal Canyon Educational Day Camp Expansion	This project would not have a significant impact on traffic volumes on Sunset Boulevard, which currently exceed 28,000 vehicles per day in this vicinity. Further, day camp activities would be focused in the summer months when volumes of commuter traffic on the adjacent street are significantly lower than at other times of the year.

would be able to park at designated lots and ride the shuttle to destination points. Consequently the shuttle system would have a beneficial impact by reducing traffic volumes in the park. Actions at several locations would help to promote transit use by providing better bus access and bus parking facilities. These locations include: the Mugu Lagoon Visitor Education Center, Circle X Ranch; Decker Canyon accessible overnight education center, Peter Strauss Ranch, Paramount Ranch, Corral Canyon overnight education center, Gillette Ranch Joint Administration and Environmental Education Center, Northern Gateway visitor center, Malibu Bluffs Visitor Education Center, and 415 PCH (Davies Home).

Under this alternative the NPS would continue the policy of encouraging and supporting others in the development of additional public transit options for visitors to the SMMNRA and commuters passing through the SMMNRA.

- **Parking**

  New paved (for high impact) and gravel (for low impact) roadside pullout parking areas would be created along the routes that would be designed as scenic corridors. These new parking facilities would allow visitors to stop and enjoy the views and other recreational activities.

  New paved parking areas would be constructed at the following high impact locations: Mugu Lagoon Visitor Education Center, Peter Strauss Ranch, Paramount Ranch, Gillette Ranch Joint Administration and Environmental Education Center, Northern Gateway visitor center, Malibu Bluffs visitor education center, the new visitor contact site at 415 PCH (Marion Davies Home), the environmental day camp at Solstice Canyon, the Cheeseboro Canyon trailhead, and the Liberty Canyon accessible trail.

  Bus parking would be provided at the 11 sites mentioned in the transit section above

Cumulative Impacts

Similar to the no action alternative, traffic volumes would increase on the roads within and near the SMMNRA due to growth in the surrounding communities. The education alternative would add a negligible increment to traffic volumes and congestion, with no change in projected levels of service. Specific facility developments are expected to have only localized traffic impacts that would be mitigated through site design and access improvements. The wide dispersal of proposed facilities minimizes the potential for noticeable cumulative impacts.

Conclusions

Transportation impacts and changes in traffic volume attributable to the education alternative would be insignificant in the regional context. The shuttle system and other actions in the education alternative that relate to facilitating public transit would help reduce growth in traffic volume and congestion along high-volume corridors resulting in a beneficial impact. These actions would also reduce the overall demand for expanded or new parking facilities at park sites within the SMMNRA.

Public Services and Utilities

Analysis

- **Public Services**

  Under this alternative, the demand for fire protection services would be similar to, or slightly higher than, current service demands. The education alternative proposes facility development in 18 areas within the park boundaries. According to the VSS and Los Angeles and Ventura Counties, who provide fire protection and emergency response services to the SMMNRA, the development of the new and modified park facilities would require additional fire protection facilities or personnel. With respect to different management intensity areas (changes in land use policies) proposed as part of this alternative, approximately 80 percent of the park area would be designated as "low intensity" as compared to approximately 30 percent with the current conditions. The increase in low intensity areas could be perceived as more "fire-defensible" than current conditions. Moreover, with the increase in low intensity areas, emergency events could be expected to decrease.

  Based on the availability and capability of existing fire protection and emergency response systems to service the new park facilities, coupled with an expectation that a change in land use policy (with a greater emphasis on low intensity areas) could result in a potential decrease in emergency events, only moderate impacts to fire protection services are expected with this alternative. These impacts would be mitigated through

increased fire awareness for park visitors, including signs and public information, and limiting storage of combustible, flammable materials onsite. With implementation of the mitigation measures and development requirements, impacts would be reduced to minor impacts.

Police protection services would be expected to remain similar to current service levels with implementation of the education alternative. As described above, a change in land use policy (with a greater emphasis on low intensity areas) could result in a potential decrease in emergency events and consequently police protection needs. Based on the type of new park facilities, a substantial demand on police protection services would not be required and only minor impacts would be expected. These impacts would be mitigated through NPS VSS consultation with the Los Angeles and Ventura County Sheriff Departments to ensure adequate police protection services. With implementation of the mitigation measures and development requirements, impacts would be reduced to negligible impacts.

- **Water/Wastewater**

The education alternative proposes the development of 18 park facilities that would require an increase in potable and non-potable water demands. While the precise rate of water consumption for these facilities is not known, it is estimated that a relatively small increase in water demands compared to existing water demands would be required to support the proposed land uses and facilities. Based on discussions with the LVMWD, which is the major provider to the SMMNRA, adequate water supplies and facilities currently exist to support the projected water demands of this alternative. In some cases, groundwater wells could also supply potable water. With respect to wastewater services and facilities, the LVMWD could provide wastewater service to the new park facilities within the SMMNRA. Based upon the expected wastewater generation rates as part of the education alternative, the LVMWD facilities have adequate capacity and facilities to support this alternative. Alternatively, on-site sewage disposal system that connected to LVMWD trunk lines could be used for most of the proposed facilities. Based on the available capabilities provided by LVMWD, only negligible impacts to water and wastewater services would be expected with the education alternative. These impacts could be further reduced by providing onsite water wells, water storage and wastewater disposal systems as necessary during facility planning stages.

- **Waste Management**

Under the education alternative, the level of waste management service could be expected to increase slightly from current generation rates. According to Los Angeles County, which owns the Calabasas Landfill, adequate solid waste capacity is available. Based on the relatively small amount of solid waste generated as part of this alternative, plus the available capacity of regional landfill facilities, only negligible impacts to waste management services and facilities would be expected as a result of this alternative. These impacts would be further reduced through identifying the location of the nearest solid waste facility with capacity to handle additional waste flow and confirmation of available solid waste capacity for each facility at the planning stage.

- **Energy**

As discussed in the energy section of the "Affected Environment" chapter, energy resources applicable to this analysis include natural gas, electric energy, and gasoline. This alternative would result in a relatively small increase in electric and natural gas

consumption. The amounts of fuel used to implement this alternative would be considered negligible when compared to the consumption rate of the entire Los Angeles Basin. Moreover, the use of energy for facility construction would cease at the end of construction activities. Adequate electric and natural gas transmission facilities and capacity is available for land uses and facilities associated with this alternative. Based on the available facilities and adequate capacity, only negligible energy impacts would be expected as a result of this alternative. These impacts would be further reduced through minimizing energy consumption on park lands, confirming availability of energy supply from local utilities, and possibly producing alternative energy supplies onsite (i.e., solar or individual generators).

Cumulative Impacts

Impacts similar to those discussed under the no action alternative would occur with implementation of the education alternative in conjunction with impacts of other actions. These cumulative impacts would be significant for public services and solid waste capacity, and minor for water supply and energy. However, the incremental impacts contributed by the education alternative itself would be minor.

Conclusions

Impacts under the education alternative would be similar to those discussed for the preferred alternative. Moderate impacts to fire and police protection services could be mitigated to minor levels. Negligible impacts to water, wastewater, waste management and energy would also occur. The mitigation measures discussed in the analysis of impacts section would limit the level of impacts associated with the education alternative.

UNAVOIDABLE ADVERSE IMPACTS

Various negligible to minor adverse impacts have been identified after mitigation for soils and geology, water resources, floodplains, biological resources, paleontology, cultural resources, visitor experience, employment, and public services and utilities. These impacts are summarized in the "Analysis of Impacts" section in each resource discussion. The impacts are not expected to have an overall effect on the respective resources. Moderate to major impacts identified for the education alternative were related to visitor experience and land use.

Increased visitor use in areas where new facilities would be developed is expected to cause increased traffic, crowding, and noise. This may have moderate adverse impacts to visitors that prefer to experience quiet and solitude.

Inconsistencies in locally designated land uses and NPS prescribed management areas would result in moderate and major adverse impacts to land use. Major adverse impacts would occur where low use management areas are adjacent to areas designated for residential development. Moderate to major impacts occur where moderate and high intensity use areas are adjacent to residential areas.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES

There would be minor irreversible or irretrievable commitments of biological resources and cultural resources. Commitments would come from vegetation, wildlife habitat, or archeological resources lost to development of permanent facilities, and on-going maintenance of roads and trails.

The management areas designated by NPS, however, would not result in irreversible/irretrievable commitment of

resources because local land use decisions would continue to control development of property not owned by NPS.

RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The education alternative would encourage limited short-term, primarily non-consumptive, uses of biological resources in the vicinity of 18 developed facilities. These uses do not come at the expense of long-term productivity. Because this alternative provides for a minimal amount of short-term uses in at least 80 percent of the SMMNRA, the constraints in this alternative on short-term uses would enhance the long-term productivity of the area to a higher level than the no action alternative.

Recreation Alternative

NATURAL RESOURCES

Air Quality

Analysis

The types of impacts on air quality resulting from proposed facility and trail development in the recreation alternative would be similar to the no action alternative. The proposed facilities and trail segment developments in the recreation alternative would have direct construction-related air quality impacts near construction sites. Air pollution emissions from construction activities would be generated as fugitive dust, or particulate matter, and diesel exhaust from heavy construction equipment. Air pollution emissions would be mitigated using one or more of the control measures identified in SCAQMD Rule 403, as appropriate. Any buildings with potential asbestos materials would be surveyed; if asbestos-containing materials were present, compliance with SCAQMD Rule 1403 would be accomplished, as appropriate, including notification to the district, and coordination with scheduling, disposal, removal, and handling procedures. See "Summary of Mitigation Measures Common to All Alternatives" section.

Air quality impacts due to construction emissions would be short-term in nature and would be minor due to the implementation of mitigation measures. Mobile source emission impacts would be negligible because there would be no significant change from existing conditions due to activities within the recreation alternative.

Cumulative Impacts

The proposed developments within the SMMNRA would not occur simultaneously and would result in temporary construction-related air pollution emissions, which would add to the existing ambient air pollution in and near construction sites. However, air quality impacts from construction activities would be minor after mitigation.

Conclusions

Facilities and trail segment development without mitigation could results in localized short-term moderate adverse impacts. Sensitive individuals could suffer from adverse health effects and visibility conditions in the park could be impacted. Following mitigation, impacts from construction activities would be minor. There would be no significant changes to the existing mobile source emissions within the SMMNRA from actions proposed in the recreation alternative. However, improvements in transit opportunities (park shuttle buses) and the use

of alternative fuels in park fleet vehicles would slightly improve the existing air quality conditions within the SMMNRA.

Impacts on the park's air quality would not be impaired by actions proposed under this alternative.

Soundscapes

Analysis

- **Construction Impacts**

  Noise impacts would occur during construction and deconstruction/demolition phases of projects included in the recreation alternative. Typical noises during construction activity would include the mechanical noises and peak noise levels associated with construction equipment. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, constitute the most persistent sources of noise during construction projects. The noises associated with operating a D8 Caterpillar Bulldozer (85 dBA, at 50 feet), for example, and various construction equipment, can be roughly twice as loud as an average car. Some construction equipment and activities can produce sounds in excess of 100 dBA, typically in short bursts, but spread over the duration of the project. These effects would be 16 or more times as loud as a typical vehicle.

  Sensitive receptors to noise in the no action alternative include picnic areas and campgrounds, residential areas, schools, hospitals, churches, and libraries. Noise mitigation measures would be used to reduce impacts in noise-sensitive areas as much as feasible. See "Summary of Mitigation Measures Common to All Alternatives" section.

Cumulative Impacts

The largest noise source within the SMMNRA is from traffic using existing roadways. Alternatives considered would not alter the current fleet mix, frequency, or speed traveled on these roads. Construction projects proposed in the alternatives would not occur simultaneously. However there would be cumulative impacts related to construction noise added to existing traffic and other ambient noise levels in and near construction sites. These impacts would be temporary in nature and would be mitigated to the greatest extent feasible.

Conclusions

Construction noise might result in temporary short-term moderate to major impacts on ambient noise levels in and near construction sites. Noise generated by demolition and excavation equipment, including trucks, graders, bulldozers, concrete mixers, and portable generators, would constitute the most persistent sources of noise during construction projects. Noise impacts sufficient to cause annoyance, negatively impact visitor enjoyment, and/or interfere with regular conversations would occur in short episodes in and near construction sites. The NRA would take action to prevent or minimize all noise that, through intensity, frequency, magnitude, and duration adversely affects the natural soundscapes and other park resources or values. Specific mitigation measures would be included in all facility development-specific plans.

The park's soundscapes would not be impaired by actions proposed in this alternative

Soils and Geology

Analysis

- **Soils**

  Similar to the other alternatives, proposed facilities and trail segment development in the recreation alternative would have direct impacts on soils and geology. These developments, along with proposed

improvements to existing facilities, include two visitor centers (plus two outside the recreation area in Exposition Park and Griffith Park), installation of eight new camps along the Backbone Trail that passes through areas of low and medium intensity use, completion of the Backbone Trail, restoration of the Morrison House, the Mugu Lagoon visitor education center, and the Decker Canyon environmental education center, and several education centers. Most of these facilities would be developed on previously disturbed sites except for the Mugu and Decker Canyon facilities. Adverse impacts of these development activities could include the removal and disturbance of soils and geologic deposits through construction activities, such as cut and fill, grading, and paving. Removal of soils and vegetation by surface-disturbing activities could also result in increased soil erosion that can, in turn, adversely affect off-site vegetation and increase siltation in downstream watercourses. Impacts from construction activities are anticipated to be short term and minor to moderate without mitigation. These impacts are considered minor or moderate because construction sites would be small and localized, erosion would be limited to construction areas, and construction activities would be intermittent and temporary in nature. If these impacts occur in areas containing non-erodible soils, the effects would be perceptible, although their presence would not have an overall effect on soil resources in the SMMNRA. If, however, such impacts occur in areas with erodible soils, a noticeable effect on area soil resources could occur and moderate impacts would result.

Adverse impacts on soils could also result from soil erosion from soil disturbance for fire management, fire suppression, search and rescue operations, and trail maintenance. These activities could result in impacts similar to those of facilities development and road construction and are expected to be continual and minor to moderate.

Visitor uses, such as camping, could also result in soil erosion and disturbance or removal of vegetation. An increase in unplanned fires resulting from increased visitor use would likely occur. Increased visitor use may result in minor to moderate, long-term impacts. These effects are expected to be minor to moderate because they would occur intermittently and temporarily due to emergency fire suppression activities or unexpected fires and would be limited to affected areas. Erosion due to visitor use would also be limited to the immediate area. Such impacts would be minor in areas with non-erodible soils or low intensities of visitor use because, although perceptible impacts may occur to soil resources due to slight erosion, these impacts would not have an overall effect on soil resources within the SMMNRA. Moderate impacts would be more likely to occur in areas with erodible soils or high visitor use due to the increased soil erosion and the increased potential for noticeable impacts that affect soil resources as a whole within the SMMNRA. An overall increase may occur, compared to the no action alternative, due to the increased number of facilities and smaller proportion of low intensity areas.

Erosion control measures such as sediment retention ponds, silt fencing or slope stabilization techniques would be included in all facility development-specific plans and would be implemented for surface disturbing activities, such as construction or trail maintenance. The SMMNRA agencies would maintain natural landscapes through minimal water use or use of reclaimed water. Adverse impacts on soil resources from management activities, maintenance, and visitor use would be minimized or avoided altogether through careful planning and enforcement. Visitor management and visitor

education would be effective in minimizing many potential impacts. Fire clearance zones would be incorporated into the planning of developments. Educational efforts, such as posting fire hazard signs, should be effective in reducing the likelihood of visitor-caused fires. Mitigation would reduce potential impacts to minor.

No beneficial effects on soil and geologic resources are anticipated for the recreation alternative.

- **Geologic Hazards**

Unmitigated geologic hazards could impose potentially major long-term adverse impacts to public health and property after facilities and trail segment development. These impacts would be considered major because there would be a potential for substantial human safety risk and property loss. The principal hazards within the SMMNRA are ground shaking, landslides, debris flows, and ground failures resulting from liquefaction. Potential impacts resulting from geologic hazards would be limited to areas where facilities would be added. The potential exposure to unmitigated geologic hazard would be greater than the no action alternative due to the increased number of facilities.

The primary mitigation for geologic hazards is the avoidance of geologic hazard zones through careful siting of facilities, and minimizing hazard impacts through careful design and construction practices. All grading and construction plans would be submitted to qualified technical staff within the administering agencies for geologic and geotechnical review prior to approval. A qualified geologist would conduct a geotechnical and geologic hazard investigation prior to project implementation with a focus on projects in areas of concern. Such areas include projects involving hillside terrain, proximity to active or potentially active faults, and areas of possible liquefaction. New facilities and trail segments would be sited to avoid geologic hazard zones. New facilities and the modification of existing facilities would be designed and constructed in compliance with all applicable state and federal building code standards. Mitigation would reduce impacts to minor.

Cumulative Impacts

Cumulative impacts to soil and geologic resources from the recreation alternative are similar to those described for the no action alternative and would continue to be minor, as identified in the listed project documents in the appendix. Though more facilities would be developed under the recreation alternative compared to the no action alternative, proposed facility locations would be localized and dispersed throughout the SMMNRA and are not expected to increase regional cumulative impacts. Adverse impacts to soil resources from the recreation alternative would be minor after mitigation, and are not expected to contribute substantially to cumulative impacts, which would remain minor.

Conclusions

Proposed facilities and trail segment development would have direct minor to moderate adverse impacts on soils and geology. Impacts would include the removal and disturbance of soils and geologic deposits through construction activities, such as cut and fill, grading, and paving. Removal of soils and vegetation by surface disturbing activities could also result in increased soil erosion that can, in turn, adversely affect off-site vegetation and increase siltation in downstream watercourses. Minor to moderate adverse impacts on soils could also result from fire management, fire suppression, search and rescue operations, and trail maintenance. No beneficial effects to soil and geologic resources are anticipated for the recreation alternative.

Geologic hazards could impose major adverse impacts to public health and property after facilities and trail segment development. Potential impacts resulting from geologic hazards would be limited to areas where facilities would be added. This alternative includes more facilities and improvements than the no action alternative and would therefore increase potential exposure to geologic hazards. Mitigation for soils and geologic hazards that would reduce adverse impacts to minor remains the same for all alternatives and is discussed in the analysis of impacts section.

Soil resources and exposure to geologic hazards on privately held land would largely depend upon local enforcement of land use and building permits by other local agencies.

The park's soils and geologic resources would not be impaired by actions proposed under this alternative.

Water Resources

Analysis

The recreation alternative potentially has the largest adverse impact on water resources in the area because of the increase in visitor numbers and the proposed development of facilities and trail segments to provide for the visitors. The types of adverse impacts are similar to those described in the no action alternative.

The most likely adverse water quality impacts from the increased visitor numbers would be from erosion risks through increased use of unsealed tracks and roads. Increased maintenance could prevent erosion and reduce otherwise long-term moderate impacts to a minor level. The most pressing adverse impact from the proposed development of facilities would be on water quantity and quality. Impacts could include an increase in the runoff volumes and rates from these areas, which could potentially cause streambed and bank erosion, habitat scour, and benthic smothering from the increased flows. In addition, runoff from these areas could contain pollutants such as hydrocarbons and heavy metals from vehicles that are common in road runoff. These pollutants could cause a moderate long-term impact on the health of the aquatic life in the streams. These impacts would be moderate because runoff containing pollutants or high levels of sediment would be expected to occur in small quantities, would be intermittent, and would be limited to the immediate area surrounding exposed open roads and construction areas. The area of potential effect would be greater than the no action alternative due to the increased number of facilities.

Direct short-term minor impacts could occur during construction of the proposed facilities. Clearing vegetation during construction and grading activities leaves soils exposed to erosion during rainfall, and displaced soils could impact the stream turbidity and suspended sediment levels, which could affect light penetration and visibility in the streams. These impacts would be considered minor because runoff containing pollutants or high levels of sediment would be expected to occur in small quantities, would be intermittent, and would be limited to the immediate area surrounding exposed open roads and construction areas.

Accidental spills of fuel and other automotive fluids could occur during the servicing of construction equipment and could impact water quality if these activities are conducted near waterways or without berms or other means of secondary containment. These impacts would occur only intermittently and would be limited areas surrounding construction sites. The area of potential effect would be greater than the no action alternative due to the increased number of facilities.

Mitigation of these impacts would be applied in two phases, during construction and longer term, more permanent measures. Mitigation during construction would be achieved through development of a construction stormwater management plan by a qualified professional, which would emphasize careful planning of activities to minimize soil disturbance. The plan would be prepared for all construction activities affecting one of more acres and would include best management practices such as temporary on-site water treatment, silt fences, and sedimentation ponds. Fueling and servicing of construction equipment would not occur within 100 feet of a waterbody or drainage area unless adequate spill control/containment is provided. These measures would retain pollutants on-site and reduce the downstream impacts of construction.

Longer-term mitigation of potential impacts for the proposed facilities and trail segment development would include treatment of the runoff from developed areas to reduce pollutants from vehicles reaching the waterways. Qualified engineers within the administering agencies would conduct a soils and engineering evaluation to support the location and design of all septic system repairs, upgrades, and installations. The permanent mitigation measures would be planned and designed as part of the detailed design of the proposed facilities. Mitigation during construction and over the long-term would reduce impacts to minor.

The proposed trail campsites could result in moderate impacts by increasing pathogen levels in the waterways and causing a threat to aquatic and human health. Mitigation of these impacts would be through designing and planning the location of the restroom facilities to minimize the delivery of pathogens to groundwater or streams.Erosion control measures would be employed to reduce erosion risks. Impacts would be reduced to a minor level with mitigation.

Another impact from the trail campsites and other facilities would be the extraction of potable water. The source of drinking water for these camps would be considered carefully, because removing too much water from the existing system could draw down streams resulting in moderate adverse impacts to aquatic life in the stream. The availability of good quality drinking water might determine the feasible size of camps and would be considered carefully in the detailed design phase. Impacts could be reduced to minor with mitigation.

Cumulative Impacts

The recreation alternative involves construction of a few facilities in the Malibu Creek watershed. These facilities would result in minor impacts to water resources from increased run-off and pollutants. This alternative would contribute to cumulative impacts in the Malibu Creek watershed. However, the contribution would be minimal due to the small size of the proposed facilities relative to larger development projects affecting the watershed. Cumulative impacts as described in the Ahmanson Ranch *Draft EIR* would remain moderate.

Increasing the proportion of areas of moderate intensity use would have minor adverse impacts on water resources in Malibu Creek and other watersheds. Cumulative impacts to water resources may increase in other watersheds in the future as densities of development increase within areas designated for future residential and commercial use. These impacts would be reviewed on a watershed basis in future NEPA/CEQA documentation when facilities are funded for site identification/development, design, and construction.

Conclusions

Overall, the recreation alternative would potentially provide the most adverse impacts on the recreation area's water resources compared with the other alternatives. However, the effects would be reduced through mitigation so that the health of waterways is not seriously impacted and impacts would be reduced to minor.

The park's water resources would not be impaired by the actions proposed in this alternative.

Floodplains

Analysis

The major drainages/floodplains in the SMMNRA, as described in the Affected Environment chapter, include Calleguas and Malibu Creeks as well at the Arroyo Sequit stream. The recreation alternative proposes the following facilities and uses in the vicinity of these floodplains that either include modified/new structures or would increase the access to and extended duration of activities (especially over night) in the floodplains.

- Mugu Lagoon Visitor Center and CSUCI Research and Information Facility are located in the vicinity of the Calleguas Creek floodplain.
- Circle X Ranch, accessible camp at Decker Canyon, Leo Carrillo State Park campground, and a trail camp on the Backbone Trail are located in the Arroyo Sequit stream floodplain area.
- Paramount Ranch Film History Museum, White Oak Ranch Living History Program, Northern Gateway Visitor Center, Malibu Bluffs Visitor Education Center, Solstice Canyon environmental day camp, Cheeseboro Canyon trailhead, and accessible trail at Liberty Canyon are in the vicinity of the Malibu Creek floodplain.

Additionally, this alternative includes areas designated as high intensity use that encompass the Calleguas and Malibu Creek floodplains as well at the Arroyo Sequit stream floodplain.

It is expected that the rehabilitation of the Leo Carrillo campground, which is in Arroyo Sequit Canyon, would entail naturalizing the stream and improved natural floodplain processes – natural flood cycles, habitat, depositions, scouring, etc. Capacity would be similar to what currently exists, so increased visitation would not be a factor. The stream tends to flood in the winter, which is the off-season for coastal camping, so visitation would likely be low at this time.

The specific location for the structures and use areas for facilities listed above has not been determined. The intensity or severity of potential impacts would ultimately depend on these locations. However, locating structures/extended use areas for one the proposed facilities within the 100-year floodplain would result in long-term moderate adverse impacts because it would increase access to the floodplain and provide for the construction of facilities within the floodplain. These actions would increase the potential for loss of life or property through increased potential for flooding. Locating structures/extended use areas for more than one facility in the 100-year floodplain would result in major long-term adverse impacts because the potential for flood damage would increase.

These impacts could be reduced through mitigation. During siting of structures and use areas for proposed facilities and trail segments in the vicinity of a floodplain, an engineering evaluation would be conducted by a qualified engineer to identify the boundaries of the

100-year floodplain. Unless infeasible, structures and use areas would be located outside the floodplain boundaries. Facilities and trails within the 100-year floodplain would be closed 24 hours prior to a predicted 50-year, 24-hour storm event. NPS would use various warning systems and would patrol use areas within the floodplain prior to and during storms to ensure that these areas are not occupied. For example, VCFCD has operated a flood warning system since February 1979. The system is called "ALERT", an acronym for Automated Local Evaluation in Real Time, which was developed by the National Weather Services. In addition, signs would be provided at the floodplain boundary on trails and access roads alerting park users
that they are about to enter an area prone to flooding during wet weather conditions.

Cumulative Impacts

The recreation alternative would result in impacts to floodplains. However, review of environmental documents for other ongoing or planned development projects did not reveal potential for impacts to floodplains. Consequently, the recreation alternative would not result in cumulative impacts to floodplains.

Conclusions

The recreation alternative could result in potentially moderate adverse long-term impacts related to the above facilities and the designation of high intensity use that encompasses the floodplains. There could be moderate long-term impacts to floodplains related to the Leo Carrillo State Park campground rehabilitation. The mitigation measures discussed in the analysis of impacts section would reduce the adverse impacts related to floodplains to minor.

The park's floodplain resources would not be impaired by actions proposed under this alternative.

Biological Resources and Wetlands

Analysis

- **Vegetation**

  Facilities and trail segment development in the recreation alternative would have direct impacts on vegetation. These developments, along with proposed improvements to existing facilities, include two visitor centers (plus two outside the recreation area in Exposition Park and Griffith Park), installation of eight new camps along the Backbone Trail that passes through areas of low and medium intensity use, completion of the Backbone Trail, and several education centers including the facilities at Mugu Lagoon and Decker Canyon. Some of these facilities could be developed on previously disturbed sites. The specific biological resources affected by the development of projects within this alternative would be presented in separate NEPA/CEQA documentation prepared for each project, although some general consequences might include the impacts discussed in the following paragraphs and sections.

  Adverse impacts of these development activities could include the removal and disturbance of native vegetation through construction activities, such as cut and fill, grading, and paving. Removal of vegetation by surface-disturbing activities could also result in increased soil erosion (see soils and geology) that can, in turn, adversely affect off-site vegetation and increase siltation in downstream watercourses. This alternative would allow for increased human activities within habitat areas supporting sensitive biological resources, including habitats and corridors that currently support mountain lions, golden eagles, other predators, and deer. Ad hoc dirt tracks would likely be established in some areas as trail users veer off established trails. Some sensitive plant species may be disturbed by these activities.

Impacts from these activities could range from negligible to major depending on the extent of sensitive species affected. Negligible impacts would occur if effects remain localized or affect only non-sensitive species. These impacts would increase to major levels if erosion affects a large number of highly sensitive species, or if a large extent of species present is affected. If construction areas would potentially support sensitive plant or wildlife species, appropriate consultations with the USFWS and CDFG would be conducted during the planning stages of the projects, and if appropriate, agreed-upon mitigation would be implemented as conditions of the projects.

Other resulting adverse effects could include invasion by exotic plant species into disturbed areas due to increased frequency of hikers carrying seeds of exotic species on their gear into native habitat areas. In addition, there could be an increase in disturbances in stream corridors, and the elimination or alteration of riparian vegetation in streambeds. Disturbance or removal of vegetation on slopes from additional trails and ad hoc tracks could increase the potential for debris flows that, in turn, could dramatically affect downslope vegetative communities, including riparian species within downstream watercourses. These impacts could range from negligible, if only slightly perceptible changes in habitat vegetation distribution occurs, to major, if exotic or invasive species begin to dominate areas that have historically been occupied by native or sensitive species.

Adverse impacts on natural vegetation could also result from fire management, fire suppression, search and rescue operations, and trail maintenance. These activities could have adverse effects on vegetation similar to those of facilities development and road construction, but because of their reactive nature could not be expected to easily account for or avoid sensitive biological resources until after emergency activities are completed. Examples of impacts would be the removal (burning) of vegetation in backfire areas, or removal of vegetation in areas where temporary flow/erosion control structures would displace riparian vegetation during storms. During these emergency activities, the loss of habitat or individuals of sensitive plant and animal species may be unavoidable. These emergency actions could create negligible to major impacts, depending on the extent of sensitive species that would need to be replaced, as discussed above. However, during routine planning for fuel management and trail maintenance activities, adverse effects on sensitive vegetation would be avoided or mitigated to minor. This would be especially true for small plant populations, such as the endangered Lyon's pentachaeta and other sensitive plant species listed in Table 13.

Visitor uses, such as camping, could also result in soil erosion and disturbance or removal of vegetation. For example, areas around campgrounds likely would be highly disturbed. Hikers could easily stray from established trails into areas supporting sensitive species. An increase in unplanned fires, and their resultant impacts, resulting from increased visitor would likely occur. Typical edge effects are expected to be substantially greater for the recreation alternative compared to the no action alternative. This increase would result from an increase in the number of facilities, trails, and tracks throughout the SMMNRA. The impact could be moderate to major in intensity for many plant communities. For example, riparian areas would likely attract large numbers of hikers. The habitat and corridor characteristics of these areas would eventually be altered. Moderate impacts could occur if historic vegetation is damaged, but could recover over time

despite continued visitor uses. Major impacts could result, however, if intense use results in permanent destruction of sensitive native populations.

No beneficial effects on biological resources are anticipated for the recreation alternative.

The primary mitigation for proposed facilities development would be to avoid undisturbed native vegetation through careful siting of facilities. New development would be sited in previously disturbed areas, which normally support stands of exotic vegetation, thereby avoiding or minimizing impacts on undisturbed native vegetation. A qualified professional prior to approval would submit all grading and construction plans to the administering agencies for review. Areas temporarily disturbed during construction would be recontoured and revegetated with appropriate native plant species, and appropriate fire-suppression zones would be maintained around developed structures.

Erosion control measures such as sediment retention ponds, silt fencing, or slope stabilization techniques would be implemented for surface-disturbing activities, such as construction or trail maintenance. Erosion control activities would be particularly important for this alternative since many unplanned trails and tracks would likely be created over the life of the plan by hikers veering off established trails.

For the development of planned facilities, pre-project surveys would be conducted prior to project implementation in the appropriate season for listed species, as well as other species of federal or state concern (see Table 13). The administering agencies would consult with the USFWS and CDFG during the detailed planning phase of a project, if any listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, ESA Section 7, or CWA Section 404/401 processes.

Monitoring by a qualified biologist is required for surface-disturbing activities in or near sensitive vegetative resources (e.g., wetlands, listed species habitat). Best management practices would be implemented during construction. For example, if construction would occur during the rainy season, temporary sedimentation retention basins could be required on some projects. In addition, servicing of construction vehicles could be prohibited within 100 feet of riparian corridors, or disturbances of native vegetation or the root zones of oak trees could be avoided by staking construction staging areas. Such measures, and others as appropriate, would ensure that impacts on biological resources due to construction would be avoided, otherwise mitigated, or that any effects would be negligible.

Adverse impacts on vegetation from management activities, maintenance, and visitor use would be minimized or avoided altogether through careful planning. Visitor management and visitor education programs, which would be developed and presented in the NEPA/CEQA documentation for each project, would be effective in minimizing many potential impacts. Such programs would be designed to educate hikers and campers about the importance of preserving the natural character of the SMMNRA for future uses.

Fire clearance zones would be incorporated into the planning of developments. Educational efforts, such as posting fire hazard signs and providing hikers brochures at trail entry points, could be effective in reducing the likelihood or frequency of visitor-caused fires and their resultant impacts. If vegetation is lost or disturbed from visitor activities, the area

would be rehabilitated or revegetated with species from an appropriate native plant palette and with seeds/plants obtained from local sources.

In general, mitigation measures would be effective in avoiding or minimizing loss of vegetation and permanent loss of currently vegetated, natural areas would be minor. The long-term health of vegetation on privately held land would partially depend upon local enforcement of land use and building permits by other local agencies, such as within the Los Angeles County Significant Ecological Areas that are not within the jurisdiction of the SMMNRA.

- **Wildlife**

Facilities and trail segment development in the recreation alternative would have minor direct, localized impacts on some wildlife species. Some development would occur on previously disturbed habitat areas where ruderal vegetation has established itself. Wildlife with an affinity to disturbed sites, such as starlings and pigeons, would be most affected. These impacts are considered minor because species inhabiting disturbed habitat are typically highly adaptable, and disturbed habitat is common in the region. Removal of undisturbed habitat would affect a different suite of wildlife. Some species would be restricted to other disturbed habitats within the SMMNRA, and to areas outside the park boundaries. Small native mammals, birds, reptiles, and amphibians would be permanently or temporarily displaced by some construction activities. Adjacent populations would be adversely affected as displaced wildlife attempt to inhabit off-site areas where other individuals are already established.

There is the potential for decreases in the habitat available for endangered, threatened, rare, or sensitive species of wildlife if vegetation and wildlife habitats are committed to permanent development. These impacts would range from negligible to major. Negligible or minor impacts would occur if only a small portion of habitat is affected, or if construction/disturbance occurs during non-breeding seasons and individuals or populations are not noticeably affected. Major impacts could result, however, if a large proportion or critical area of the population is affected or if disturbance occurs during breeding seasons such that the viability of the population is threatened. In addition, major impacts could occur if sensitive or endangered species are impacted, even to a small extent.

Edge effects would be expected in habitats directly adjacent to developed areas and along trails and staging areas for recreational events. Edge effects are changes within a "zone of influence" between habitats that may vary in width, depending upon what is measured. The intensities of edge effects frequently are dependent upon the sizes and shapes of the disturbed areas and, therefore, the lengths of the edges between habitats. Such effects could include changes in biotic factors as temperature, relative humidity, penetration of light, and exposure to wind, each of which could affect the presence or distribution of species within the area. Biotic changes due to edge effects could include, among others, elevated plant mortality, depressed migratory bird usage and breeding near habitat margins, or increases in insect species diversity (Soule 1986, Meffe and Carroll 1997). For projects within the SMMNRA, the size and extent of such edge effects, if any, would be analyzed in additional documentation prepared for each project, but would likely be negligible to minor in intensity because the siting of projects would be localized and limited to areas that have been previously disturbed, which normally support stands of exotic species rather than sensitive native species.

Visitor uses, such as hiking, horseback riding, and mountain biking, could have direct and indirect, adverse effects on wildlife. This alternative would increase the spatial extent of these activities in the SMMNRA. Direct impacts include disturbance of soils supporting vegetation, trampling or removal of vegetation, and disturbance of wildlife activities and habitat, especially for species, such as deer, that are sensitive to the presence of humans.

Indirect effects from visitor use include disruption of wildlife activities and behaviors for some species. Some species of wildlife, such as deer, are especially vulnerable to predation at water holes. Species that are sensitive to human intrusions include mule deer, mountain lion, and intermediate-sized predators (e.g., bobcat, coyote, and gray fox) and they might avoid water sources as a result of visitor activity. This is especially critical during the drier seasons of summer and fall. In this alternative, visitor use would be encouraged year-round over a more extensive area compared to the no action alternative. Adverse human-wildlife interactions are likely to be more frequent with the recreation alternative compared to the no action alternative, and the effects could range from moderate to major intensity, depending on levels of visitor use and proximity to sensitive wildlife. Moderate impacts would occur in areas where human activity is localized and alternative resources or habitats are available for affected species. Major impacts would be expected in areas that are subjected to widespread human activity centered around critical resources for sensitive species, such as water supplies.

Construction planning and monitoring by a qualified biologist in areas supporting sensitive wildlife would reduce or prevent some impacts. Pre-project surveys would be conducted by a qualified biologist prior to project implementation in the appropriate season for listed species, as well as other species of federal or state concern (see Table 14). A qualified staff member of the administering agency would review all grading and construction plans prior to approval. The administering agencies would consult with the USFWS and CDFG during the detailed planning phase of a project, if any listed species or its habitat might be affected during a proposed action. Compliance with California law would be required for proposed actions that might affect state listed species. This would include notification of the CDFG through the subsequent NEPA/CEQA, ESA Section 7, or CWA Section 404/401 processes.

Monitoring by a qualified biologist would likely be required for surface-disturbing activities in or near sensitive wildlife resources (e.g., listed species habitat). Best management practices would be implemented during construction. Such measures, and others as appropriate, would ensure that impacts on wildlife due to construction would be avoided, otherwise mitigated, or that any effects would be negligible.

Visitor use management and education, through visitor information centers, signs, and brochures, would be effective in minimizing many indirect impacts on wildlife.

- **Habitat Connectivity**

As with vegetation, proposed facilities development in the recreation alternative would have direct impacts on habitat connectivity. Any loss, disturbance, or degradation of vegetation in habitat linkages and wildlife movement corridors would also have an adverse impact on an area's value as habitat. Habitat linkages and wildlife movement corridors have been identified in various studies of the region, including choke point areas where limited opportunity is

available for safe movement across major roadways. Many wildlife corridors have been constrained by present developments within the SMMNRA boundaries.

One major habitat connection of regional importance connects the Santa Monica Mountains north through Simi Hills to the Santa Susanna and San Gabriel Mountains. Pending legislation will include upper Las Virgenes Canyon and Liberty Canyon in the SMMNRA boundary, which are vital portions of this wildlife corridor. Local habitat connections tend to follow canyon bottoms (riparian linkages) and ridgelines (upland linkages), often with interconnections with other such corridors. Loss of habitat connectivity leads to habitat fragmentation and isolation of some taxa of wildlife. Some taxa, as with many birds, could utilize archipelago (island) linkages, but most cannot. The placement of facilities within riparian areas, ridgelines, or island habitats could interrupt habitat connectivity for numerous wildlife species. The number of facilities and extent of high and moderate use intensity management areas under the recreation alternative would constitute a major impact to regional wildlife movement and gene flow. As visitor use and development increase, it would become increasingly difficult for sensitive species to migrate between undisturbed habitat, jeopardizing their viability as a species.

As with the no action alternative, the primary mitigation to offset impacts from new development would be to avoid sensitive habitats and habitat linkage areas through careful project siting. A qualified biologist within the administering agencies would evaluate all proposed actions for their effects on habitats and on habitat connectivity to avoid or mitigate further habitat fragmentation. New developments would be excluded from existing wildlife corridors, or minimized to the greatest extent practicable, to ensure the continued exchange of genes and individuals between wildlife populations within and adjacent to the SMMNRA. Degraded habitats within conserved linkage areas would be restored. The most effective means of maintaining habitat connectivity is through the maintenance of sufficiently wide (greater then 400 feet) habitat linkages between major blocks of habitat. Whenever possible, documented wildlife movement areas would be improved with the appropriate NEPA/CEQA documentation prepared for the project.

- **Wetlands**

  Several of the proposed facilities included in the Recreation Alternative would be located in close proximity to wetland resources:

  - ***The Mugu Lagoon Visitor Education Center*** – would be sited between PCH and the lagoon within an already disturbed upland site. This facility includes a perimeter boardwalk for visitor viewing of the lagoon and associated wildlife.
  - ***The Circle X Ranch*** – includes a substantial riparian area located adjacent to existing developed areas and trails.
  - ***Leo Carrillo State Park campground*** – is in a major drainage and riparian area. The rehabilitation of this facility would be focused toward relocating selected campground activity areas away from riparian areas to allow for riparian habitat enhancement and restoration.
  - ***Decker Canyon*** – would become an accessible overnight and day use environmental education center and camp.
  - ***Paramount Ranch*** – has a substantial riparian area that bisects it. Existing access through this riparian area would be maintained.

- ***Accessible trail at Liberty Canyon*** – would interpret adjacent wetlands.

Cumulative Impacts

Cumulative impacts on biological resources from the recreation alternative would be similar to those minor impacts identified in the listed project documents in the appendix and described under the no action alternative. However, the recreation alternative would contribute more to adverse cumulative impacts. Implementation of the recreation alternative would have a net negative impact on regional biological resources. There would be incremental loss of vegetation and wildlife habitat over the 30-year life of the project. Because the recreation alternative would encourage of high level of dispersed visitor activities in the SMMNRA, this alternative would have the greatest amount of impacts on vegetation, wildlife, and habitats among all the alternatives assessed. With intensifying future visitor use, cumulative impacts to biological resources may become moderate with implementation of the recreation alternative.

Conclusions

Proposed facilities development in the recreation alternative would have negligible to major direct impacts on vegetation. Adverse impacts of these development activities could include the removal and disturbance of native vegetation through construction activities, such as cut and fill, grading, and paving. Removal of vegetation by surface-disturbing activities could also result in increased soil erosion (see soils and geology) that can, in turn, adversely affect off-site vegetation and increase siltation in downstream watercourses. Resulting negligible to major adverse effects would include invasion by exotic plant species into disturbed areas and the elimination or alteration of riparian vegetation in streambeds.

Negligible to major adverse impacts on natural vegetation could also result from fire management, fire suppression, search and rescue operations, and trail maintenance. Visitor uses, such as camping, could also result in soil erosion and disturbance or removal of vegetation. An increase in unplanned fires, and their resultant impacts, resulting from increased visitor use would likely occur. Typical edge effects are expected to be substantially greater for the recreation alternative compared to the no action alternative.

Facilities development would have direct, localized impacts on some wildlife species. There is the potential for decreases in the available habitat for endangered, threatened, rare or sensitive species of wildlife if vegetation and wildlife habitats are committed to permanent development. Typical edge effects would be expected in habitats directly adjacent to developed areas. The recreation alternative would increase the spatial extent of visitor uses, such as hiking, horseback riding and mountain biking, which could have direct and indirect, adverse effects on wildlife. Of particular concern is wildlife access to water sources. Adverse human-wildlife interactions are likely to be more frequent with the recreation alternative compared to the no action alternative and could result in moderate to major impacts.

As with vegetation, proposed facilities development could have major direct impacts on habitat connectivity. Any loss, disturbance, or degradation of vegetation in habitat linkages and wildlife movement corridors would also have an adverse impact on an area's value as habitat.

No beneficial effects on biological resources are anticipated for the recreation alternative.

In general, mitigation measures would be effective in avoiding or minimizing loss of vegetation and reducing impacts to minor. Permanent loss of currently vegetated natural areas would be similar to or greater than the

no action alternative. Long-term health of vegetation on privately held land would partially depend upon local enforcement of land use and building permits by other local agencies, such as within the Los Angeles County Significant Ecological Areas, that are not within the jurisdiction of the SMMNRA.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national recreation area's establishing legislation, (2) key to the natural or cultural integrity or opportunities for enjoyment of the national recreation area, or (3) identified as a goal in this general management plan or other relevant NPS planning documents. Consequently, the NRA's biological resources and wetlands would not be impaired by actions proposed under this alternative.

Paleontological Resources

Analysis

The level of dispersed recreational activities within the SMMNRA would be greater under the recreation alternative than under any alternative. Potential long-term minor to moderate adverse impacts to paleontologic resources would result from an increased number of trails and trail use, resulting in the erosion of sediments of moderate to high paleontologic potential, and an increase in the frequency of unauthorized collection of fossils. Both would result in the loss of the scientific and educational potential of those specimens. Instituting multi-use trails would result in an increase in long-term moderate adverse impacts due to an increase in erosion of paleontologically sensitive sediments, relative to the no action alternative. Completion of the Backbone Trail would result in a long-term adverse impact by exposing previously protected sediments of high to moderate paleontologic potential to erosion.

Fire management and fire suppression operations could also result in moderate adverse impacts to paleontologic resources to the extent that undisturbed sediments of moderate to high paleontologic potential are impacted by excavation and grading. Similarly, construction of new facilities could result in moderate short-term impacts to paleontologic resources in areas where undisturbed sediment of high to moderate paleontologic potential lie near the surface. These impacts would be considered moderate if limited deposits of moderate to high paleontological potential were disturbed, either due to construction or trail and visitor use.

Mitigation of impacts to paleontologic resources remains much the same for all the alternatives. It would be achieved by recovering the scientific data potential and educational potential of the fossils through controlled collection by a qualified paleontologist. Prior to construction, a qualified paleontologist would determine the paleontologic sensitivity of affected sediments during the administering agencies' geological and geotechnical review of grading and construction plans. If excavation were to occur in sediments that have high to moderate paleontologic sensitivity, monitoring by a qualified paleontologist would occur during excavation. If fossils were discovered, then construction would halt in the immediate vicinity of the find until they have been removed in a scientifically controlled fashion by a qualified paleontologist. These measures would reduce impacts to paleontological resources to a minor level.

Cumulative Impacts

Although the recreation alternative has the lowest percentage of low intensity use areas among all alternatives, cumulative impacts areas would be expected to be minor, similar to those described in the no-action alternative

because impacts would be localized and could be successfully mitigated. Cumulative impacts would therefore remain minor, as identified in the listed project documents in the appendix.

Conclusions

The level of dispersed recreational activities within the SMMNRA would be greater under the recreation alternative than under any alternative. Long-term moderate adverse impacts to paleontologic resources would result from an increased number of trails and trail use. Moderate impacts would be evident in the erosion of sediments of moderate to high paleontologic potential, an increase in the frequency of unauthorized collection of fossils, fire management or suppression operations, and construction of new facilities. The mitigation measures discussed in the analysis of impacts section would reduce impacts to minor.

The administering agencies would implement public education regarding the scientific and educational importance of fossils and promote awareness of enforcement of California State and NPS non-collection policies.

The park's paleontological resources would not be impaired by actions proposed under this alternative.

CULTURAL RESOURCES

Analysis

Because much of the recreation area would be open to multi-use recreation under this alternative, the cultural resources within the SMMNRA might be impacted to a greater extent by degradation associated with increased visitor use. In particular, greater numbers of developments would increase the likelihood of impacts to historic properties through construction related activities, while the expanded numbers of visitors would increase the rate of such indirect effects as erosion, inadvertent damage, vandalism, and congestion. The development of stewardship programs could limit the destructive effects of vandalism through increased public involvement and awareness. Another effort would be continuing enhancement of the interpretive and educational components of the recreation area cultural resource management program, as funding allows, to increase public sensitivity to the importance of the recreation area's cultural resources and potentially reduce impacts by instilling a greater understanding and appreciation of these resources.

- **Archeological Resources**

  Archeological resources would be protected from the effects of development and visitor use where possible; however, sites would remain susceptible to natural deterioration, inadvertent damage by human activity, and vandalism in backcountry areas. Some sites would eventually be lost. Further deterioration or destruction of archeological sites in the recreation area by natural forces or human activity would result in the loss of resource values associated with the prehistory and history of the region. Such impacts are expected to be negligible, because this alternative would not increase public accessibility to archeological sites in the SMMNRA. With appropriate mitigation, these impacts could be further reduced.

  To ensure that adequate consideration and protection are accorded archeological resources, cultural resources investigations, including records searches and archeological surveys conducted by qualified state park or NPS archeologists would precede all ground-disturbing activities on recreation area lands. Archeological and Native American Indian monitoring would occur where ground disturbance is expected in the vicinity of known or suspected cultural resources. If

cultural materials were unearthed during construction activities, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and assessed and any necessary mitigation undertaken. Potential mitigation measures could include avoidance, preservation, or data recovery. If construction impacts on federal lands upon archeological sites cannot be avoided, the California State Historic Preservation Office and concerned Native American Indian groups would be consulted in the development of mitigation strategies.

If human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered on federal lands during facilities or trail improvements, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed.

The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*.

- **Historic Structures**

Implementation of the recreation alternative would not directly impact either the Adamson or Will Rogers Houses, which are located within the recreation area's boundaries and listed on the National Register of Historic Places. The existing management and use of the structures would remain unchanged, and existing levels of visitation are not expected to appreciably increase.

The docking of scenic coastal tour boats at Santa Monica Pier would have negligible, if any impacts upon Looff's Hippodrome, which is also listed on the National Register. The pier already experiences a high level of visitation and this coastal tour service is not anticipated to appreciably increase the existing level of visitation. Any corresponding visual or audible intrusions associated with the extremely small increase in visitation expected would not alter or diminish the integrity of Looff's Hippodrome.

Although visitor use to structures would be limited, minor impacts resulting from continued visitation of the Adamson House, Looff's Hippodrome, and the Will Rogers House might occur, due largely to wear-and-tear and routine maintenance activities. These impacts would be considered minor because they are localized and gradual. Management practices employed by the recreation area and cooperating agencies, including use of appropriate maintenance and repair materials and supplies, in accordance with the guidelines listed below, would reduce or eliminate these effects.

To appropriately preserve and protect the many historic structures of SMMNRA that are either listed in, or potentially eligible for, listing on the National Register of Historic Places, all preservation and rehabilitation or preservation treatment efforts, as well as daily, cyclical, and seasonal maintenance, would continue to be conducted in accordance with the National Park Service's *Management Policies* (2001) and *Cultural Resource Management Guideline* (1996), and the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

Making historic structures accessible to the physically challenged, to comply with the Architectural Barriers Act of 1968 and the Rehabilitation Act of 1973, could result in the loss of historic fabric or the introduction of new visual and non-historic elements. For example, the doorways of buildings could require widening and ramps or the addition of wheel chair lifts to the exterior of buildings. These impacts would be considered moderate because they would

potentially involve only a few components of sites with high data potential. To avoid impacts to the historic values of these structures, historic architectural studies and plans for modification would be developed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995) to reduce damage to the historic integrity of structures and ensure the highest levels of compatibility possible. All plans would be reviewed by the SHPO and concerned preservation societies prior to implementation of any changes. As a result, these impacts would be kept to negligible levels.

Actions undertaken to minimize erosion along historic roads and trails would be implemented in a manner that would preserve the integrity of these cultural resources. Such measures would include use of historic building materials or concealment of erosion control structures using historic landscape features, in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). As a result, these impacts are expected to be negligible.

- **Cultural Landscapes**

The expansion and/or improvement of existing visitor centers and interpretive facilities, or construction of new structures, parking areas, trailheads and trails, and picnicking and camping sites, could impact the cultural landscapes of the SMMNRA by disrupting or destroying historic settings and other characteristics of integrity. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. The careful design of facility improvements, the use of compatible materials in the construction of new facilities, interpretive waysides or trails, and consultation with qualified staff and Native American Indian groups, should ensure that such impacts are kept to negligible levels.

Potentially significant cultural landscapes of the recreation alternative would be protected and preserved, but continued visitor use could result in increased erosion and vandalism, accelerating the degradation of contributing landscape features and elements such as roads and trails, structures, fence rows, and orchards. These impacts could result in fairly extensive changes in historic character depending on the extent and use intensity of such facilities, and could be considered moderate impacts. The SMMNRA interpretive and educational programs could be used to increase visitor appreciation of the resources and how they are preserved and managed. The programs could also provide an understanding of how to experience such resources without inadvertently damaging them. The continuation of these programs could eliminate or reduce visitor impacts to cultural landscapes to negligible levels.

Designating Mulholland Drive, Topanga Canyon Boulevard, Malibu Canyon Road, Kanan Dume Road, Decker Canyon Road, and PCH as scenic corridors would encourage public interest in the corridors and their associated resources. These component actions would entail the formal evaluation and documentation of these routes as heritage corridors or cultural landscapes. Such designations would possibly generate traffic, which could create major impacts that would include widespread and highly noticeable deterioration of setting, feeling, and other aspects of integrity. Through the assessments and consultations that would attend such a designation, additional mechanisms, incentives, and opportunities to protect the resource could be provided to reduce or eliminate these impacts. Such measures would include traffic volume control, parking control, and expanded transit options.

◗ **Ethnographic Resources**

Through consultation with concerned Native American Indian groups, ethnographic resource values are taken into consideration early in the planning process. The developments that are proposed under the recreation alternative could be designed to reduce direct impacts to known ethnographic sites. These impacts would be considered moderate because they could potentially result in a perceptible degradation of a Native American site with moderate to high historic data potential. These sites, however, would to a greater or lesser extent, depending upon their location and nature, remain susceptible to such impacts as natural deterioration, inadvertent damage by human activity, and vandalism. Erosion control, restricted access, visitor education, and other measures would be implemented to ensure that these impacts are kept to negligible levels.

Supporting the Native American Indian participation in the interpretation of ethnographic resources would continue to expand the interpretation of the ethnographic resources of the SMMNRA. Such actions would enhance the ability to protect and preserve ethnographic resources and continue traditional cultural practices, as well as increase appreciation of traditional cultures.

◗ **Component Actions**

Actions that are scheduled to proceed under the recreation alternative are listed below, along with their potential impact on cultural resources and the mitigation measures necessary to minimize them. In many instances, however, the presence or absence of cultural resources has not yet been ascertained. As a result, the intensity of impacts cannot always be defined.

1. ***Land use would be managed within the intended use intensities: low 25 percent, moderate 65 percent, high 10 percent.*** – The moderate intensity use areas would serve as buffer zones between sensitive areas and areas of high intensity, although moderate use areas are accessible to most visitors. With a minimal percentage of land use planned as low intensity use areas, impacts to cultural resources are likely. These impacts include the effects of ground-disturbing activities related to construction, as well as accelerated erosion, vandalism, and looting occurring at a rate generally proportionate to the level of use. The high percentage of moderate intensity use areas would provide increased accessibility to the low intensity use areas, resulting in similar effects. The following mitigation measure is recommended:

   ✔ A monitoring program that would assess the rate and nature of impacts to cultural resources in the vicinity of trails and other high intensity use areas would be established and mitigated by administering agencies. This program would focus on a subset of resources, and the results extrapolated to similar settings. Should monitoring reveal the acceleration or degradation of cultural resources to an unacceptable level, mitigation measures would be developed in consultation with recreational groups, the SHPO, and concerned Native American Indian groups. Such measures would include avoidance, data recovery, access restriction, signs, visitor education, and similar actions. These measures should assist in keeping impacts to minor levels.

2. ***All trails would be multi-use trails.*** – Many trails would require improvements to accommodate multi-use activities. Multi-use trails would likely bring more people into the area, resulting in an increased rate of impacts to historic properties from trail construction and other ground-

disturbing activities. Impacts would also occur from increased erosion, inadvertent damage, and vandalism. Trails that provide access to cultural landscapes, or components of cultural landscapes, could result in impacts that diminish the contributing values to the landscape. These effects could be moderate to major depending on visitor use intensity, proximity to cultural sites, and data potential of affected sites. The following mitigation measure is recommended:

✔ The administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed component actions.

Because multiple uses have the potential to accelerate degradation of cultural resources on all trails, all trails would be subject to cultural resources investigations, including inventory, evaluation, and impact assessment. Mitigation measures, including avoidance, data recovery, access restrictions, and visitor education, would be developed for those resources that could be expected to be impacted by component actions. These measures could be expected to reduce impacts to minor levels of intensity.

3. ***Sycamore Canyon would be designated a multi-use corridor.*** – The designation of the canyon as multi-use corridor would attract more visitors to the area and result in an increase in types of uses, resulting in an increased potential to negatively impact historic properties. Trail construction and other improvements requiring ground disturbance might directly affect historic properties, while horseback and mountain bike riding could be inadvertently destructive to cultural resources by accelerating erosion rates. These impacts could range from major, depending on the proximity and intensity of visitor use to sites with high data potential. The following mitigation measures are recommended:

✔ The administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed component actions.

✔ Because multiple uses have the potential to accelerate degradation of cultural resources on all trails, all trails would be subject to cultural resources investigations conducted by qualified state park or NPS archeologists, including inventory, evaluation, and impact assessment.

✔ Mitigation measures, including avoidance, data recovery, access restriction, and visitor education, would be developed for those resources that could be expected to be impacted by this component action. These measures could be expected to reduce impacts to minor levels of intensity.

4. ***The Backbone Trail would be open to multi-use recreation.*** – Some trails in sensitive areas might be rerouted to avoid those areas, or to minimize the length of crossing across the sensitive area. Trail construction might adversely affect nearby archeological sites, historic properties and the cultural landscape, either through ground disturbance caused by trail construction, or through increased erosion, access, or vandalism could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if trails are sited through, or adjacent to, sites with high cultural potential. Rerouting of trails away from sensitive areas would increase the protection and

preservation of cultural resources within those areas. The following mitigation measure is recommended:

✔ A cultural resource inventory, evaluation, and impact assessment program conducted by a qualified state park or NPS archeologist would precede all ground-disturbing activities. If any resources are identified, mitigation measures, including avoidance or data recovery, would be developed and implemented. Concerned Native American Indian groups would be consulted regarding potential impact to cultural landscapes of traditional significance and would assist in developing appropriate mitigation measures.

5. ***The Mugu Lagoon Visitor and Environmental Education Center would be at the western end of the recreation area off of the Pacific Coast Highway. A boardwalk would extend into the lagoon.*** – The proposed site would be located in a previously disturbed area. A historic Native American Indian settlement of considerable cultural significance, however, is located in the vicinity and unidentified components of this site might be present in the proposed site area. If intact but unidentified subsurface archaeological deposits are present, construction or other ground-disturbing activities could result in major impacts. The presence of a boardwalk in the lagoon could be seen as an infringement on Native American Indian beliefs, traditions, and other cultural values, while, construction might adversely affect the dynamics of the cultural landscape. As a result, further development in the area would be of concern to Native American Indians and impacts could be major. The following mitigation measures are recommended:

✔ A cultural resources inventory, including subsurface exploration, would be completed by a qualified state park or NPS archeologist or landscape architect prior to the finalization of plans associated with the Mugu Lagoon Center, to assess the potential to adversely impact archeological deposits. If resources are identified, mitigation through avoidance or data recovery would be undertaken. Monitoring by a qualified state park or NPS archeologist and a Native American Indian would accompany any ground-disturbing activities. In the event that any unanticipated resources are encountered, all construction in the vicinity would be halted until the significance of the find is evaluated and an appropriate course of action defined. To assist with visitor education, the education center would include information on traditional lifeways and the significance of the settlement of Muwu to the cultural history of the area.

6. ***Expansion of the staging facilities in Rancho Sierra Vista would offer improved access to recreation trails in the western Santa Monica Mountains.*** – This facility is located in the area of a Chumash village and is a cultural landscape as well. Expansion in this area might be seen as an infringement on Native American Indian beliefs, traditions, and other cultural values. Expansion might require land clearing and/or construction. Ground-disturbing construction activities might impact aspects of the integrity of the landscape that contribute to its significance, including such attributes as setting, association, and feeling through the introduction of incompatible structures or features. This would be considered a moderate impact because it would noticeably change the character of

the property. The following mitigation measures are recommended:

✔ The administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed component actions. Design guidelines would follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

✔ Trail construction would be subject to a cultural resources investigation conducted by a qualified state park or NPS archeologist, landscape architect or landscape historian, including inventory, evaluation, and impact assessment.

✔ Mitigation measures, including avoidance, data recovery, access restriction, and visitor education, would be developed for those resources that would be expected to be impacted by this component action. These measures would help to reduce impacts to minor or negligible levels.

7. ***Facilities at Circle X Ranch would be expanded to offer overnight accommodations for groups. The facilities would also offer improved access to backcountry recreation trails, including the Backbone Trail.*** – Circle X Ranch is near a historic Native American Indian settlement. Expansion in this area might be seen as an infringement on Native American Indian beliefs, traditions, and other cultural values. Expansion might require land clearing and/or construction. Ground-disturbing construction activities might directly impact buried cultural materials or other historic or traditional values. These impacts could range from negligible to major, depending on the data potential of affected sites and visitor use intensity. The following mitigation measures are recommended:

✔ The administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed component actions.

✔ Trail construction would be subject to a cultural resources investigation conducted by a qualified state park or NPS archeologist, including inventory, evaluation, and impact assessment.

✔ Mitigation measures, including avoidance, data recovery, access restriction, and visitor education, would be developed for those resources that would be expected to be impacted by this component action. These measures would reduce impacts to negligible levels.

8. ***An overnight camp with additional overnight accommodations for groups that would offer a variety of outdoor recreation opportunities, for people of all abilities, would be located in Decker Canyon.*** – The Decker Homestead is a cultural landscape. Furthermore, significant archeological properties might be present in the vicinity. Construction activities necessary for the creation of the center might directly impact contributing elements of the cultural landscape, through the introduction of incompatible structures or features, and/or disturb potential buried cultural deposits, while increased visitation might result in indirect effects from increased erosion, inadvertent damage, or vandalism. These impacts could range from negligible to major, depending on the data potential of affected sites and visitor use intensity. The following mitigation measures are recommended:

✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions that might affect cultural resources.

✔ The administering agencies would consult with concerned Native American Indian groups to ensure that this program is developed in a manner consistent with respect for Native American Indian beliefs, traditions, and other cultural values.

✔ Prior to any ground-disturbing activities, a program of inventory, evaluation, and impact assessment would be conducted. If resources are identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be conducted.

9. ***Filming activity would continue at Paramount Ranch on set locations established throughout the cultural landscape by Paramount in the 1930s and 1940s to preserve the educational opportunities associated with the site's historic use. A film history museum would also be developed.*** – Paramount Ranch is a historic property and has been determined a significant cultural landscape eligible for listing on the National Register of Historic Places. Any construction or reconstruction might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character of the property. The following mitigation measures are recommended:

✔ Complete the cultural landscape report.

✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures could include avoidance, data recovery through HABS/HAER documentation, reconstruction using historically materials, or similar measures, in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995)

10. ***The White Oak Farm would offer exhibits interpreting early ranching in southern California.*** – The White Oak Farm is a historic property. Construction activities necessary for the creation of the center might directly impact contributing elements of the cultural landscape through the introduction of incompatible structures or features, and/or disturb potential buried cultural deposits, while increased visitation might result in indirect effects from increased erosion, inadvertent damage, or vandalism. These impacts could range from negligible to major, depending on the data potential of affected sites and visitor use intensity. The following mitigation measure is recommended:

✔ Recommend that CDPR evaluate for National Register eligibility.

✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures could include avoidance, data recovery through HABS/HAER documentation, reconstruction using historic materials, or similar measures in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995).

11. ***A northern gateway visitor center would be located near the intersection of Highway 101 and Malibu Canyon/Las Virgenes Road.*** – No historic properties under the care of Santa Monica Mountains National Recreation Area would be impacted. No mitigation measures for historic properties are necessary.

12. ***A visitor center to be located at Malibu Bluffs.*** – Malibu Bluffs is an urban area and is in proximity to a historic Native American Indian settlement. Construction-related ground disturbance might directly impact intact subsurface cultural deposits, if present. Because of the minimal potential for affecting previously undisturbed archeological deposits with high data potential, these impacts would be considered minor. The following mitigation measures are recommended:

    ✔ Prior to any ground-disturbing activities, the Malibu Bluffs visitor center site would be subject to a cultural resources investigation by a qualified state park or NPS archeologist, including inventory, evaluation, and impact assessment. Mitigation measures, including avoidance, data recovery, access restriction, and visitor education, would be developed for those resources that could be expected to be impacted by this component action. Monitoring by a qualified state park or NPS archeologist and a Native American Indian representative would accompany any ground disturbing construction. If any unanticipated materials are discovered, all ground-disturbing activities in the area would cease until the significance of the find could be determined and an appropriate course of action approved. Such action could include avoidance, preservation in place, or data recovery. As a result, impacts could be kept to minor or negligible levels.

13. ***A scenic coastal boat tour would be run by concession with docking points located at Santa Monica Pier and Malibu Pier.*** – The Santa Monica Pier is the site of Looff's Hippodrome, which is listed on the National Register of Historic Places. As noted above, docking for a boat tour at this location would result in an extremely small increase in the number of visitors to the site, which is not expected to impact Looff's Hippodrome. No mitigation actions on federal lands would be required.

14. ***A visitor contact station is to be located at Exposition Park.*** – No historic properties under the care of Santa Monica Mountains National Recreation Area would be impacted. Based on the stated proposed action, no mitigation efforts for historic properties would be undertaken by the recreation area.

15. ***Mulholland Drive, Topanga Canyon Boulevard, Pacific Coast Highway, Malibu Canyon Road, Kanan-Dume Road, and PCH would be designated as scenic corridors.*** – Road and parking area improvements might be necessary and the construction activities associated with these actions could directly affect cultural resources. Designation as scenic corridors would also likely generate increased traffic, which could create major impacts such as deterioration of setting, feeling, and other aspects of integrity. These impacts are expected to be negligible due to the existing disturbed character of the area and the limited additional access that would occur to undisturbed cultural sites. The following mitigation measures are recommended:

    ✔ All road improvements would be preceded by a cultural resources

investigation, inclusive of inventory, evaluation, and impact assessment conducted by a qualified state park or NPS archeologist, followed by mitigation, if necessary. Such measures would include avoidance or data recovery. The documentation that would accompany designation would provide information that could be integrated into the management of this resource. Through the assessments and consultations that would attend such a designation, additional mechanisms, incentives, and opportunities to protect the resource from indirect impacts could be provided to reduce or eliminate these impacts. Such measures could include traffic volume control, parking control, and expanded transit options. As a result, impacts could be kept to negligible levels.

16. ***Nonhistoric trails are to be rerouted in the vicinity of sensitive areas to avoid those areas.*** – Rerouting of trails away from sensitive areas could increase the level of protection afforded to historic properties in those areas. However, other sensitive cultural resources might be revealed during trail construction and might be adversely affected by construction activities. These impacts could range from negligible to major, depending on the data potential of affected sites and visitor use intensity. The following mitigation measures are recommended:

    ✔ A qualified state park or NPS archeologist would conduct a cultural resources inventory, evaluation, and assessment program before all trail construction. If any resources are identified, mitigation measures such as avoidance or data recovery, would be implemented. Native American Indian groups would be consulted regarding appropriate mitigation of potential impacts to cultural landscapes and places of traditional or sacred significance. To the extent possible, the trail would be constructed to avoid or minimize impacts to the traditional values of such places. As a result, such impacts are expected to be negligible.

17. ***Parking would be gravel or on permeable surfaces wherever feasible.*** – To the extent that paved parking surfaces could seal and protect buried cultural resources, gravel or permeable-surface parking areas would afford less protection in the same area. Lack of protection under this action, however, would be negligible. The following mitigation measure is recommended:

    ✔ A cultural resources inventory, evaluation, and assessment program conducted by a qualified NPS or state park or NPS archeologist would precede all grading and construction. If resources are identified, such mitigation measures as avoidance or data recovery would be conducted.

18. ***Rehabilitate the Morrison Ranch House to reflect the ranching period.*** – The Morrison House is a historic structure and may be eligible for listing in the National Register of Historic Places. Any construction or rehabilitation or preservation treatment might cause the alteration, removal, or destruction of original materials that contribute to the historic significance of the ranch. This would be considered a moderate impact because it would noticeably change the character of the property. The following mitigation measure is recommended:

    ✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of this property. Specifically, an inventory, evaluation, and

impact assessment program would be carried out by a qualified state park or NPS archeologist, a historical landscape architect, or a historic architect, followed by mitigation if necessary. Mitigation measures could include avoidance, data recovery through Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation, reconstruction using historically appropriate materials and prepared by an historical landscape architect in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). As a result, impacts would be expected to be negligible to minor.

19. ***The Peter Strauss Ranch would host small art exhibits, concerts, fund-raisers, and family events. Circulation and parking improvements would be necessary.*** – The Peter Strauss Ranch is a historic property and a cultural landscape. Construction and other ground-disturbing activities necessary for parking improvements might directly impact contributing elements of the cultural landscape, and/or potential buried cultural deposits, while increased visitation might result in indirect effects from increased erosion, inadvertent damage, or vandalism. These impacts, however, are expected to be negligible because they would remain localized and would affect only individual components of the site. The following mitigation measures are recommended:

    ✔ National Register nomination forms need to be completed and the Peter Strauss Ranch listed on the National Register. Proposed modifications need to be reviewed by an historical architect.

    ✔ In accordance with Section 106 of the National Historic Preservation Act, the administering agencies would consult with the SHPO and the ACHP prior to the implementation of any of the proposed actions that might affect cultural resources.

    ✔ A qualified state park or NPS archeologist and historical landscape architect would conduct a program of inventory, evaluation, and impact assessment prior to any ground disturbing activities. If resources are identified, mitigation of impacts through avoidance, data recovery, access restriction, and visitor education would be implemented.

20. ***Watersheds and coastal resources would be protected and preserved through management practices and improvements.*** – Watershed improvements such as construction or revegetation activities might impact any historic properties present in these project areas if ground-disturbing activities take place on or near archeological sites, or these activities result in erosion of archeological deposits. The impacts would range from minor to major depending on the extent and depth of erosion, as well as the presence of significant cultural resources. The following mitigation measure is recommended:

    ✔ All construction or revegetation projects involving ground disturbance would be preceded by a cultural resource inventory, evaluation, and impact assessment program. If necessary, mitigation measures, including avoidance or data recovery, would be developed and implemented. As a result, impacts could be kept to negligible levels.

21. ***The campground at Leo Carrillo State Park would be rehabilitated to integrate the campground with natural riparian processes.*** – The rehabilitation of natural riparian

processes would likely enhance the value of the area as a cultural landscape. However, historic properties might be impacted if rehabilitation involves subsurface disturbance. Such impacts, however, are expected to be negligible to minor, because of the low probability of such impacts affecting a site with high data potential. No mitigation would be required for activities that do not involve ground disturbance. The California Department of Parks and Recreation would assess potential impacts and recommend treatment measures for cultural/historic resources according to departmental policy, the *California Public Resources Code*, the California Environmental Quality Act, and the *Secretary of Interior's Standards for Historic Properties*.

✔ Compliance with Section 106 of the NHPA and CEQA would be required for all construction activities that alter the historic characteristics of the Leo Carrillo State Park property. Specifically, an inventory, evaluation, and impact assessment program would be carried out by a qualified state park or NPS archeologist, followed by mitigation if necessary. Mitigation measures would include avoidance or archeological data recovery.

22. ***Develop coastal education center at Leo Carrillo State Park to provide environmental education and visitor orientation*** – Construction activities might directly affect historic properties in the project area through disturbance of archeological sites, erosion or other means. These impacts could range from negligible to moderate. Negligible impacts could occur if trails are constructed some distance away from any sites with high cultural value. Moderate impacts could result, however, if trails are sited through, or adjacent to, sites with high cultural potential. The following mitigation measures are recommended:

    ✔ A cultural resources inventory, evaluation, and impact assessment program would precede construction. If resources are identified, mitigation measures such as avoidance of data recovery would be implemented.

    ✔ Qualified state park or NPS archeologists and Native American Indian representatives would conduct monitoring of ground disturbance in the vicinity of known or suspected archeological resources. Should unknown resources be identified, a qualified state park or NPS archeologist would conduct data recovery in consultation with the SHPO.

Cumulative Impacts

The potential cumulative impacts with the implementation of the recreation alternative could be greater than any other alternative considered due to the designation of only 25 percent of NPS lands as low intensity management. However, with implementation of mitigation, the recreation alternative would result in similar negligible cumulative impacts to cultural resources as discussed under the no action alternative.

Conclusions

The recreation alternative offers a low level of protection for cultural resources, reserving only 25 percent of the lands for low intensity use and 65 percent as moderate intensity, with the remaining 10 percent for high intensity. Component actions are also the most intensive in the moderate use area, likely leading to increased impacts in the zone. Under the recreation alternative, there would be a notable increase in the potential number of cultural resources that would be affected by project impacts and required

mitigation. The potential for unintended damage would also increase. Impacts to cultural resources from the recreation alternative would be minor with the implementation of the mitigation measures discussed in the analysis of impacts section.

The park's cultural resources would not be impaired by actions proposed under this alternative.

VISITOR EXPERIENCE

Analysis

The recreation alternative would maintain use intensities in proportions similar to the no action alternative, with the exception of a 5 percent decrease in areas of low intensity use. This could prove to be a major negative impact for those who prefer solitude and a rustic recreational experience, but a moderate beneficial effect for those who enjoy a structured, developed recreational experience with frequent encounters with other visitors and vehicles.

While there is not a marked increase in types of recreational opportunities under this alternative, the amount of visitor services (restrooms, formal parking, potable water, picnic areas and infrastructure) would increase, as most NPS lands would be managed according to moderate or high intensity management practices. While any development would harmonize with natural and cultural settings and adhere to sustainable design practices, the proposed developments could possibly create major negative impacts for those who prefer a wildland experience. Increased visitor use would result in more traffic, noise, and crowding.

Overnight camping would be allowed in more areas, which would possibly have a minor beneficial effect on those who do not enjoy the designated camping sites. There would be a scenic coastal boat tour as in the preferred alternative, which would provide additional perspective and a moderate to major beneficial experience for the visitor who enjoy group experiences.

Educational opportunities are similar to those in the education alternative: expanded camp facilities at Circle X, accessible camp at Decker Canyon, a visitor facility at the intersection of Highway 101 and Las Virgenes /Malibu Canyon Road, an education program at White Oak Farm, Mugu Lagoon visitor education center, Strauss Ranch fine arts education, Rancho Sierra Vista environmental education center, the Malibu Bluffs visitor education center, and the Morrison Ranch House/cultural landscape restoration. Unique to this alternative would be a visitor contact site at the Santa Monica Pier and Exposition Park. These sites would provide information and orientation to visitors on the eastern end of the recreation area and would increase awareness and visitation to the SMMNRA. Implementation of educational programs may have moderate beneficial effects on visitor experience by encouraging visitors to responsibly enjoy resources in the SMMNRA while decreasing visual and auditory intrusions.

This alternative, more than any of the others, would reduce isolation of the resources from visitors. This, over time, would have a major negative impact on the visitor who values the scenic beauty and rarity of the Santa Monica Mountains. These impacts could be mitigated through guiding visitors to high use areas, encouraging visitor use during less busy times, limiting opportunities for parking outside of designated parking areas and providing adequate parking at, or alternative transportation to, high intensity use areas. In addition, mitigation measures could include improving existing trails and creating trails and adequate camping areas in moderate intensity use areas.

Cumulative Impacts

Though review of available environmental

analysis documents for the current and planned projects described in the cumulative impacts methodology section did not identify significant cumulative impacts to visitor experience that would result from these projects, these projects would increase development, human presence and residential areas adjacent to and within the SMMNRA. Similar to the no action alternative, cumulative impacts of the recreation alternative would be moderate to major. To those who prefer a wildlife experience, the recreation alternative would have a more substantial negative contribution to cumulative impacts because of increased facilities development combined with decreased percentage of low intensity use areas.

Conclusions

The existing range of recreational visitor experiences would be maintained. However, visitor services would be increased and improved. A range of educational opportunities would be available. These would be moderate beneficial effects on visitor experience.

Opportunities for solitude would be available only in the designated preserve areas, and that would diminish as the population grows and visitors seeking that experience increase because this alternative does not provide for boundary adjustments. Impacts related to increased visitation could be minimized but would remain moderate to major impacts after mitigation.

LAND USE AND SOCIOECONOMIC ENVIRONMENT

Land Use

Analysis

The recreation alternative would promote expansion of recreational opportunities through new recreation area development on lands previously disturbed and of low environmental sensitivity and habitat value. Recreational uses and facilities would be strategically located to ensure access and long-term preservation of natural communities. This alternative proposes no change to designated preserve areas and small alterations to the existing SMMNRA boundary. Visitor-serving uses such as multi-use trails and camping facilities would be allowed on most of the NPS-owned parkland, including portions of Zuma/Trancas Canyon, Paramount Ranch, Rancho Sierra Vista/Satwiwa, Peter Strauss Ranch, Circle X Ranch, Rocky Oaks, Castro, Franklin Canyon Ranch, Cheeseboro Canyon, and Solstice Canyon. As illustrated in Figure 9 – Recreation Alternative, only 25 percent of the area would be placed under low use intensity management, while 65 percent would be in moderate use intensity management areas, and 10 percent would be under high use intensity management.

The proportion of SMMNRA land encompassed by low use intensity management areas under the recreation alternative would decrease compared to the no action alternative, from 30 to 25 percent. This decrease would increase visitor access to more of the park, which would predominantly be managed under moderate use intensity management. Although this alternative implies a more intense visitor use throughout much of the park than any of the other alternatives, inconsistencies between designated residential areas and adjacent low and moderate use intensity management areas would still occur in Los Angeles and Ventura Counties, as well as in the cities of Los Angeles, Malibu, Westlake Village, and Calabasas.

Major impacts resulting from inconsistencies between locally designated residential areas and adjacent low use intensity management areas would be similar to those discussed under the no action

alternative. Due to the lower proportion of parkland under low use intensity management in the recreation alternative, these inconsistencies may be slightly decreased in portions of Los Angeles County south of Cold Creek Preserve and between Malibu Creek State Park and Zuma/Trancas Canyons along Kanan Dume Road, and in the city of Los Angeles on the east edge of Topanga State Park, which are shifted to a moderate use intensity management zone under the recreation alternative.

Although major impacts continue to occur due to inconsistencies between designated residential land use and adjacent moderate use intensity management areas, impacts in some areas may be reduced to moderate in areas of low density residential development, as discussed in the impacts analysis for the preferred alternative. The impacts analysis included for the no action alternative applies to the recreation alternative in those areas that remain under moderate use intensity management. However, because those areas described above that are shifted to moderate use intensity management areas occur primarily adjacent to areas of low density hillside residential development, additional inconsistencies between residential land use and moderate use intensity management areas would likely be considered moderate.

The land use inconsistencies between locally designated residential areas and low and moderate use intensity management areas could be partially mitigated by close coordination between NPS and local jurisdictions during land development policy and plan amendment processes to increase the consistency of land use management approaches.

High intensity management areas under the recreation alternative would be surrounded by both designated open space and residential land, as described under the no action alternative. Designated open space and residential land that would be affected by high use intensity management areas and facilities under the recreation alternative would be similar to those described under the no action alternative, both in extent (10 percent of the SMMNRA) and in location within the SMMNRA. In addition, as discussed in the no action alternative impact analysis, high intensity management areas would be inconsistent with adjacent residential development, and would result in moderate to major impacts, depending on the type of facility or use envisioned by the NPS and the density of surrounding residential development.

Negligible to minor impacts would occur in high use management areas that are adjacent to locally designated open space depending on the focus of the open space area for urban recreation or resource protection. These inconsistencies would occur in similar areas to those identified under the no action alternative. Negligible impacts would result from high use management areas if an adjacent open space area has the primary goal of urban recreation because such uses/facilities would not substantially detract from the existing use of the area. More substantial impact could be expected if an open space area is dedicated to resource protection, because additional development and/or use nearby could diminish the role of the open space to protect natural resources. However, these impacts would remain minor since the high use intensity designation and facility development would only occur on already disturbed or highly used sites, or at the perimeter of the parkland, and would therefore not greatly decrease the value of the open space. In addition, high use intensity areas are not located adjacent to any locally designated habitat preservation areas, which minimizes the potential for impact to protected natural resources due to visitor use in high intensity areas or facilities. Activity within the SMMNRA would also be

controlled, and would likely afford a higher level of protection than areas under local control. These impacts would be partially mitigated through the design of access within high use intensity management areas to direct visitor use away from areas primarily designated for resource protection.

No boundary studies are proposed under the recreation alternative. Therefore no additional inconsistencies in land use would occur outside of the SMMNRA boundary.

Cumulative Impacts

Cumulative impacts related to land use would be major and long-term, and are similar to those described under the no action alternative. Although the recreation alternative proposes a number of additional park facilities, they would be located in disturbed areas and would not contribute appreciably to the overall development of the region.

Conclusions

The recreation alternative would promote expansion of recreational opportunities through new recreation area development on lands previously disturbed and of low environmental sensitivity and habitat value. Improvements proposed in moderate and high intensity areas would change the undeveloped character of portions of the SMMNRA.

The mitigation measures discussed in the analysis of impacts section would limit land use impacts associated with the recreation alternative.

Population, Housing and Employment

Analysis

The recreation alternative is reviewed in light of population, housing, and employment projections for Ventura and Los Angeles Counties. The projections are based on the Southern California Association of Governments' *Regional Comprehensive Plan*. The regional growth forecasts were disaggregated to counties, subregions, cities and small geographic areas. The model used to produce small area forecasts allocates growth to different areas based on their relative attractiveness. These forecasts were reviewed by local planning agencies (i.e., cities and counties) for consistency with zoning and local growth constraints such as topography, and adjusted to represent the best estimate of future growth. The adjusted forecasts serve as the basis for review of each alternative, including the recreation alternative.

The general plans for each participating local planning agency identified the steep terrain of the Santa Monica Mountains as potentially undevelopable and often designated such land "open space" or, in some cases, the lowest residential density. Growth and development opportunities lie in the flat lands where vehicular access and public services are amply provided or easily extended. Accordingly, local planning agencies use general plan policy and zoning regulations to discourage future residential, commercial, industrial and institutional development on terrain with physical constraints and natural resource value, a growth management approach reflected in the adjusted, published forecasts. The number of jobs created to staff new facilities would be small within the SMMNRA or surrounding region relative to the number of jobs in the region. Negligible impacts to population, housing, or employment would be expected because the number of jobs that would result from this alternative would not result in a detectable change to the employment opportunities in the region. For these reasons, selection of the recreation alternative is not likely to alter local and regional population, housing and employment growth forecasts.

Cumulative Impacts

Similar to the no action alternative, no cumulative impacts on population, housing, or employment would be anticipated with implementation of the recreation alternative.

Conclusions

The recreation alternative would not result in a change in population or housing within the SMMNRA or surrounding region. The number of jobs created to staff new facilities would be minimal within the SMMNRA or surrounding region. No mitigation measures are required.

Transportation

Analysis

- **Regional and Local Highway Network**

  In the recreation alternative Mulholland Highway, Mulholland Drive, Topanga Canyon Boulevard, Las Virgenes Road/Malibu Canyon Road, Kanan Dume Road, and PCH would be designated as scenic corridors. Applying the scenic corridor designation to these corridors would not cause any significant increases in traffic volumes on any of the major corridors within the recreation area.

  All of the roads within and near the SMMNRA would continue to provide for visitor access. Commuter traffic patterns would not change as a result of actions taken in this alternative. Traffic volumes and the level of service provided by the roads in the SMMNRA would be similar to the no action alternative, where most of the major routes within and near the SMMNRA would be operating at capacity by the year 2015. The secondary and minor roads within the SMMNRA would continue to operate at acceptable levels of service.

  The actions taken as part of this alternative would not produce any regionally significant traffic impacts. The significant traffic impacts occurring as a result of this alternative would be localized around the proposed education facilities. The traffic related impacts resulting from major facility additions or modifications included as part of this alternative are described in Table 27.

  Under the recreation alternative the NPS would continue their policy of encouraging and supporting the removal of street lighting and power poles from the scenic corridors within SMMNRA.

- **Public Transit**

  The recreation alternative does not include any actions that would directly change the amount or type of public transit service being provided within the SMMNRA. This alternative includes actions at several locations that would help to promote transit use by creating new facilities that would be designed to accommodate buses, and improving some of the existing facilities so that they could accept visitors arriving by bus. These locations include the Mugu Lagoon Visitor Center, Satwiwa Native American Cultural Center, Decker Canyon Camp, Paramount Ranch, the Northern Gateway Visitor Center, and the Malibu Bluffs Visitor Center. These improvements would make transit service accessible to many of the recreational destinations within the SMMNRA . The designation of the several routes as scenic corridors would also promote tour bus activity.

  Under this alternative the NPS would continue the policy of encouraging and supporting others in the development of additional public transit options for visitors to the SMMNRA and commuters passing through the SMMNRA.

- **Parking**

  New gravel (for low impact) and paved (for high impact) roadside pullout parking areas

Table 27

RECREATION ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
Mugu Lagoon Visitor Education Center	The proposed facility would not generate any measurable amount of new vehicle trips, although it would generate several new bus trips per day. The proposed facility would have direct access from PCH including designated left and right turn lanes. A minor amount of traffic congestion would be created by traffic turning into and out of the site.
CSUCI Research and Information Facility	This facility on the outskirts of the SMMNRA would increase the volume of traffic on West Potrero and Potrero Roads and would increase the amount of traffic congestion at the major intersections along these corridors.
Expansion at Rancho Sierra Vista/Satwiwa	This education day camp would be adaptively reused as an environmental/ contemporary Native American culture education day camp. The expansion of this facility would generate a minor amount of new vehicle and bus trips into the area on days when major activities are scheduled. This action would result in a minor increase in traffic on Potrero.
Expand Circle X Education Camp	Expansion of the camp would result in a minor number of new vehicle trips in this portion of the SMMNRA including one or two new bus trips. This expansion would create a negligible increase in traffic volumes on Little Sycamore Canyon Road and Yerba Buena Road.
Decker Canyon Accessible Overnight Education Center	Creation of this new facility would generate a minor amount of new vehicle trips per day into the area on days when programs are occurring. This would result in a negligible increase in traffic volumes on Decker Road, the western portion of Mulholland Highway, and Westlake Boulevard.
Scenic Coastal Tour	The coastal boat tour would begin at both the Malibu and Santa Monica Piers and travel along the coast of the SMMNRA. Visitors taking the tour would park their vehicles in existing parking areas near each pier. This tour would generate a small number of new vehicle trips into the area. The tour would result in a negligible increase in traffic volumes on PCH. Turning movements into parking areas near each pier and on-street parking maneuvers along PCH would increase during the times when tours are occurring. This action would cause a minor amount of traffic congestion during times before and after the tour when the visitors are attempting to enter or exit the parking areas.
Paramount Ranch Film History Education Center	The proposed facility improvements are expected to increase the number of visitors who stop at this location. It would create a minor increase in the traffic volumes on Cornell Road and the central portion of Mulholland Highway. It would also increase the amount of turning movements at the Cornell/Mulholland intersection. This increase in traffic would not change the Level of Service provided by the adjacent corridors nor the Cornell/ Mulholland intersection.
White Oak Farm History Museum	This new facility would generate a negligible amount of new traffic into the area including one or two bus trips per day. This action would not create any measurable traffic congestion or impacts.

(cont'd) **Table 27**

RECREATION ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
Franklin Canyon Education Day Camp Program	This action would result in one or two additional bus trips into the area per day during times when the camp is active. This would create a negligible increase in traffic on Franklin Canyon Drive and portions of Mulholland Drives. The overall traffic impacts would be negligible.
Expand Boundary to Griffith Park, consolidate visitor center with an existing facility, and include Stone Canyon Reservoirs	This action would not create any measurable change in traffic patterns or volumes.
Northern Gateway Visitor Center	This new facility would create a moderate increase in traffic on Agoura Road between the site and Las Virgenes Road. It would also increase the turning movements at the signalized intersection of Agoura and Las Virgenes Roads. This new facility would not change the Level of Service provided by this intersection. This facility would not create any traffic congestion problems or notable traffic impacts.
Malibu Bluffs Visitor Education Center	The creation of this new visitor center would create a small number of new trips into the area resulting in a negligible increase in traffic volumes on PCH. Activity at the new center would increase the turning movements at the signalized intersection of Malibu Canyon Road and PCH, but would not result in a change in the Level of Service provided by the intersection.
Pacific Coast Highway Visitor Site at Santa Monica Pier	This new visitor contact station would be located on the Malibu Pier. Visitors to this contact station would park in existing parking areas near the pier. This facility would not generate any measurable amount of new traffic to the area. It would create some additional turning movements into and out of parking lots and on-street parking spaces near the pier. This facility would not create any significant traffic congestion.
Exposition Park Visitor Information Center	This new visitor information center would be located in Exposition Park within the city of Los Angeles. This new facility would not generate any new traffic nor create any measurable traffic congestion problems.
Peter Strauss Ranch Event Area	This action would create a minimal increase in traffic on the central portion of Mulholland Highway and some minor traffic congestion resulting from vehicle turning into and out of the site. The sight distance at the site entrance would be improved as part of the proposed improvements.
Morrison Ranch House and Cultural Landscape Restored	This proposed facility would not generate any direct traffic impacts because the proposed ranch house restoration and its cultural landscape would not be accessible to visitors by vehicle. The facility would be accessible via a pedestrian trail from the Cheeseboro Canyon/Palo Comado Canyon trailhead. A minimal amount of additional traffic might be generat ed at the Cheeseboro trailhead parking facility (see the analysis below for improvements at Cheeseboro).

(cont'd) **Table 27**

RECREATION ALTERNATIVE – TRAFFIC IMPACTS

Proposed Facility Additions or Modifications	Description of Traffic Impacts
Environmental Education Day Camp at Solstice Canyon	This proposed program would not generate any measurable traffic impact. It is envisioned that students would arrive via bus and that the program would occur seasonally, perhaps one day a week or less. Thus, the program would generate only a handful of trips per week at most. Park facility improvements to be constructed during 2002 will greatly enhance vehicular circulation, accommodate school buses, and increase the amount of visitor parking at Solstice Canyon.
Backbone Trail Completion	Completion of the remaining 5 miles of the 60-mile Backbone Trail and related campsites would not have measurable traffic impacts. Vehicular access will continue to be provided at a number of existing facilities, and the remaining segment of the trail that is to be completed does not intersect any major roadways. The trail does cross Yerba Buena Road in the general vicinity of the existing Backbone Trail, Mishe Mokwa, and Circle X trailhead parking lots. These facilities would continue to be at or near capacity on weekend days when seasonal temperatures are cooler.
Leo Carrillo Visitor Education Center	This facility would create only minor impacts and good levels of service would be maintained. Access to the site is provided via the Pacific Coast Highway, which provides two travel lanes in each direction and a center turn lane at this location. Traffic volumes of less than 12,000 vehicles per day along this portion of the PCH are only a fraction of the volumes experienced east of Malibu Canyon Road. During project design, a dedicated westbound left turn lane would most likely be created with new road striping. A right turn deceleration lane would also be considered. A dedicated westbound left turn lane would most likely be created pending a site plan.
Expansion of Cheeseboro Trailhead and Liberty Canyon Accessible Trail	This project would alleviate current parking shortages and off-site parking impacts by adding substantial parking. Subject to development of a specific plan, parking would likely increase from roughly 70 to 110 parking spaces plus 10 parking spaces for vehicles with horse trailers. Minor increases in traffic volume on Cheeseboro Road, a dead-end street serving residential and park uses, would be attributable to the additional parking. These projected increases and their impacts have been analyzed by Los Angeles County staff in consultation with the affected community. The impacts were determined to be acceptable and manageable.
Mission Canyon Trailhead Development	This project would not have a significant impact on traffic volumes on Sepulveda Boulevard, a high-volume arterial street that serves as an alternate to Interstate 405. The site has ample parking and access improvements at the point of ingress would be considered as part of the reclamation and reuse of this former landfill site.
Temescal Canyon Educational Day Camp Expansion	This project would not have a significant impact on traffic volumes on Sunset Boulevard, which currently exceed 28,000 vehicles per day in this vicinity. Further, day camp activities would be focused in the summer months when volumes of commuter traffic on the adjacent street are significantly lower than at other times of the year.

would be created along the routes that would be designated as scenic corridors. These new parking facilities would allow visitors to stop and enjoy the views and other recreational activities.

New paved parking areas that include space for bus parking would be constructed at the following high impact locations: Mugu Lagoon Visitor Center, Satwiwa Native American Cultural Center, Decker Canyon Camp, Paramount Ranch, White Oak Farm, the Northern Gateway Visitor Center, Circle X Ranch, Peter Strauss Ranch, and the Malibu Bluffs Visitor Center.

Cumulative Impacts

Similar to the no action alternative, traffic volumes would increase on the roads within and near the SMMNRA due to growth in the surrounding communities. The recreation alternative would add a negligible increment to traffic volumes and congestion, with no change in projected levels of service. Specific facility developments are expected to have only localized traffic impacts that would be mitigated through site design and access improvements. The wide dispersal of proposed facilities minimizes the potential for noticeable cumulative impacts.

Conclusions

Transportation impacts and changes in traffic volume attributable to the recreation alternative would be insignificant in the regional context. Actions in the recreation alternative that would promote transit use would have a beneficial impact by reducing growth in traffic volumes and congestion along high volume corridors. These actions would also reduce the overall demand for expanded or new parking facilities at park sites within the SMMNRA.

Public Services and Utilities

Analysis

- **Public Services**

Under this alternative, the demand for fire protection services could be expected to increase when compared to current service demands. The recreation alternative proposes facility development in 18 areas within the park boundaries while maximizing recreational uses within the park. While the slight changes in management conditions alone would not be expected to change fire protection requirements, maximizing recreational land uses within the park could be perceived as creating greater fire risks than what is currently experienced within the park. According to the VSS and Los Angeles and Ventura Counties, the development of new and modified park facilities under the recreation alternative could result in a potential increase in emergency events, potentially resulting in moderate impacts to fire protection services. These impacts would be mitigated through increased fire awareness for park visitors, including signs and public information, and limiting storage of combustible, flammable materials onsite. With implementation of the mitigation measures and development requirements, impacts would be reduced to minor impacts.

With implementation of the recreation alternative, police protection services would be expected to remain similar to, or increase slightly when compared to current service levels. Based on the type of new park facilities, a significant demand on police protection services would not be required. However, a change in land uses policy with greater emphasis on recreational land uses could result in a potential increase in emergency events and consequently police protection needs. Therefore, minor impacts

would be expected as a result of the recreation alternative. These impacts would be mitigated through NPS VSS consultation with the Los Angeles and Ventura County Sheriff's Departments to ensure adequate police protection services. With implementation of the mitigation measures and development requirements, impacts would be reduced to negligible.

- **Water/Wastewater**

  The recreation alternative proposes the development of numerous park facilities that would require an increase in potable and non-potable water demands. While the precise rate of water consumption for these facilities is not known, it is estimated that a relatively small increase in water demands compared to existing water demands would be required to support the proposed land uses and facilities. Based on discussions with the LVMWD, which is a major provider to the SMMNRA, adequate water supplies and facilities currently exist to support the projected water demands of this alternative. In some cases, on-site groundwater wells could also supply potable water. With respect to wastewater services and facilities, the LVMWD could provide wastewater service to the new park facilities within the SMMNRA. Based upon the expected wastewater generation rates as part of the recreation alternative, the LVMWD facilities have adequate capacity and facilities to support this alternative. Alternatively, on-site sewage disposal systems that connected to LVMWD trunk lines could be used for most of the facilities. Based on the available capabilities provided by LVMWD, only negligible impacts to water and wastewater services are expected with the recreation alternative. These impacts could be further reduced by providing onsite groundwater wells, water storage and wastewater disposal systems as necessary during facility planning stages.

- **Waste Management**

  Under the recreation alternative, the level of waste management service could be expected to increase slightly from current generation rates. According to Los Angeles County, which owns the Calabasas Landfill, adequate solid waste capacity is available. Based on the relatively small amount of solid waste generated as part of this alternative, plus the available capacity of regional landfill facilities, only negligible impacts to waste management services and facilities would be expected as a result of this alternative. These impacts would be further reduced through identifying the location of the nearest solid waste facility with capacity to handle additional waste flow and confirmation of available solid waste capacity for each facility at the planning stage.

- **Energy**

  As discussed in the energy section of the Affected Environment chapter, energy resources applicable to this analysis include natural gas, electric energy and gasoline. This alternative would result in a relatively small increase in electric and natural gas consumption. The amounts of fuel used to implement this alternative would be considered negligible when compared to the consumption rate of the entire Los Angeles Basin. Moreover, the use of energy for facility construction would cease at the end of construction activities. Adequate electric and natural gas transmission facilities and capacity is available for land uses and facilities associated with this alternative. Based on the available facilities and adequate capacity, only negligible energy impacts are expected as a result of this alternative. These impacts would be further reduced through

minimizing energy consumption on park lands, confirming availability of energy supply from local utilities, and possibly producing alternative energy supplies onsite (i.e., solar or individual generators).

Cumulative Impacts

Impacts similar to those discussed under the no action alternative would occur with implementation of the recreation alternative in conjunction with impacts of other actions. These cumulative impacts would be significant for public services and solid waste capacity, and minor for water supply and energy.

Conclusions

Impacts under the recreation alternative would be similar to those discussed for the preferred alternative. Moderate impacts to fire and police protection services could be mitigated to minor levels. Negligible impacts to water, wastewater, waste management and energy would also occur. The mitigation measures discussed in the analysis of impacts section would limit the level of impacts associated with the recreation alternative.

Energy consumption on parklands would be minimized.

The availability of energy supply from local providers should be confirmed prior to facility implementation. If service is questionable, onsite production of power should be encouraged using alternative sources of energy, including solar power or individual generators.

UNAVOIDABLE ADVERSE IMPACTS

Various negligible to minor adverse impacts have been identified after mitigation for soils and geology, water resources, floodplains, biological resources, paleontology, cultural resources, visitor experience, employment, and public services and utilities. These impacts are summarized in the "Analysis of Impacts" section in each resource discussion. The impacts are not expected to have an overall effect on the respective resources. Moderate to major impacts identified for the recreation alternative were related to biological resources, visitor experience, and land use.

Proposed facilities development would have moderate adverse impacts on biological resources through vegetation removal and habitat loss. Edge effects are expected in habitats directly adjacent to developed areas and along trails, and may include elevated plant mortality and decreased usage by migratory and breeding birds. Adverse human-wildlife interactions are expected to increase with the increased spatial extent of visitor uses.

Increased visitor use in areas where new facilities are developed is expected to cause increased traffic, crowding, and noise. This may have moderate adverse impacts to visitors that prefer to experience quiet and solitude.

Inconsistencies in locally designated land uses and NPS prescribed management areas would result in moderate and major adverse impacts to land use. Major adverse impacts would occur where low use management areas adjacent to areas designated for residential development. Moderate to major impacts occur where moderate and high intensity use areas are adjacent to residential areas.

IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES

There would be minor irreversible or irretrievable commitments of biological resources and cultural resources. Vegetation, wildlife habitat, or archeological resources

lost to development of permanent facilities, and on-going maintenance of roads and trails would result in irreversible/ irretrievable commitments of resources.

The management areas designated by NPS, however, would not result in irreversible/irretrievable commitment of resources because local land use decisions would continue to control development of property not owned by NPS.

RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The recreation alternative encourages short-term, primarily non-consumptive, uses of biological resources (e.g., bird watching, and hiking). These uses might come at the expense of long-term productivity of habitat within the low intensity areas, which eventually would accumulate indirect affects from increased fire frequencies, increased disturbances of wildlife, and frequent incursions by visitors into all habitats within the SMMNRA boundaries.

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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